

DOWNTOWN BOSTON - A Public Place

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Submitted to the Department of Architecture in partial fulfillment of the requirements of the degree of Master of Architecture at the Massachusetts Institute of Technology, June 1984.

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Abstract

ABSTRACT

DOWNTOWN BOSTON - A PUBLIC PLACE

by Robert G. Meiklejohn

Submitted to the Department of Architecture on February 14, 1984 in partial fulfillment of the requirements for the Degree of Master of Architecture.

This thesis explores the physical and experiential qualities of public space in downtown Boston. Streets are the dominant element of urban public space; other elements include plazas, squares, promenades, alleys and parks. Together they form an interwoven public network giving the city its basic physical structure and the context for its built environment.

The complexity of public space is not well understood by designers, developers, city administrators or sociologists; and as a result it is generally dealt with in a piecemeal fashion which is reflected in the built environment of the city. The intent of this thesis is to explore this complexity, as reflected in the built environment, in order to more fully understand its many dimensions, existing problems and potentials.



Thesis Advisor: John R. Myer
Title: Professor of Architecture
Head of the Department

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Thesis is a focused learning experience and a chance to explore issues in depth. Certainly a large part of the knowledge that one derives from it comes from personal research, observation, thinking and rethinking; but another equally important and very special part comes from discussions with one's thesis advisor, readers, other faculty, classmates and friends. I would like to thank my thesis advisor, Jack Myer, for his sensitive and thoughtful criticisms; and thesis readers, Stan Anderson and Gary Hack, for their comments and advice.

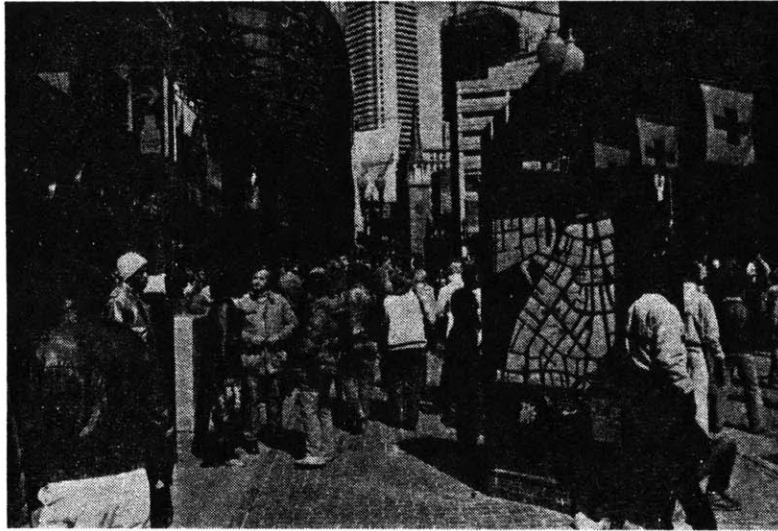
Special thanks to Harry Zuzak, President of EPEC Consulting Western Ltd., and the other partners of the firm for their encouragement and support.



And, of course, to someone very close ... Pat, for her help and endurance.

Introduction

1



I Washington Street - Downtown Crossing.

This thesis is an exploration into the physical and experiential qualities of urban public space. The context is downtown Boston, focusing upon its retail core, Downtown Crossing. The intent of the exploration was to analyze the particular physical and experiential qualities of urban public space in downtown Boston, as a prelude to design proposals for improving its public qualities.

The approach is termed exploratory because of the complexity of the topic. There are so many facets of

urban public space, each in itself complex, that only a limited number of parameters could be analyzed in this thesis. Furthermore there is no end to the amount of analysis one might do for each parameter.

Another reason for calling it exploratory is that the analysis is based upon personal observations and documented information. The documented information however is scanty, and concerning public perceptions and desired qualities of urban public space in downtown Boston there is almost no information. Occasional public opinion polls of city residents indicate general problem areas but do not probe the issues in any depth. The problem in getting this information is the lack of an established public forum, or medium, by which this can be clearly expressed to the city council and administration. Design decisions for public space are therefore based upon a precarious level of information. Much more effort is needed to obtain a public consensus on desired qualities in Boston's downtown public space.

Urban public space is the "common space" of the city - it includes streets, squares, parks, plazas,

What to spend, and where?

Q: For each of the following, please tell me whether you think the city government should spend a lot more on that item than it is now spending, a little more, about the same as it is now spending, a little less or a lot less than it is now spending.

	More	Same	Less	Don't know	A lot more
Sanitation, keeping streets clean.	73%	23%	2%	2%	32%
Improving and maintaining the city's parks	67%	27%	3%	3%	25%
Making decent and affordable housing more available	82%	11%	3%	4%	55%
Hiring more police	72%	24%	3%	1%	39%
Improving the quality of education in our public schools	81%	12%	4%	3%	61%
Maintaining and repairing the city's streets and sidewalks	79%	16%	3%	2%	47%
More services for the elderly	74%	22%	1%	3%	40%

Source: Research Analysis Corp.

2 Part of a Boston resident poll - published in The Boston Globe, Aug. 9, 1983, prior to a mayoral election.

promenades, and other public spaces, and public oriented private spaces. As this thesis points out, there are varying degrees of publicness, or privateness, of spaces in the city, and the boundaries between public and private territories often overlap. This thesis focuses upon the "open" public space of downtown Boston - that is its streets, plazas, and so on. These elements are interwoven into a public network which extends throughout the city giving the city its physical structure and forming the context, or setting, for the city's built environment.

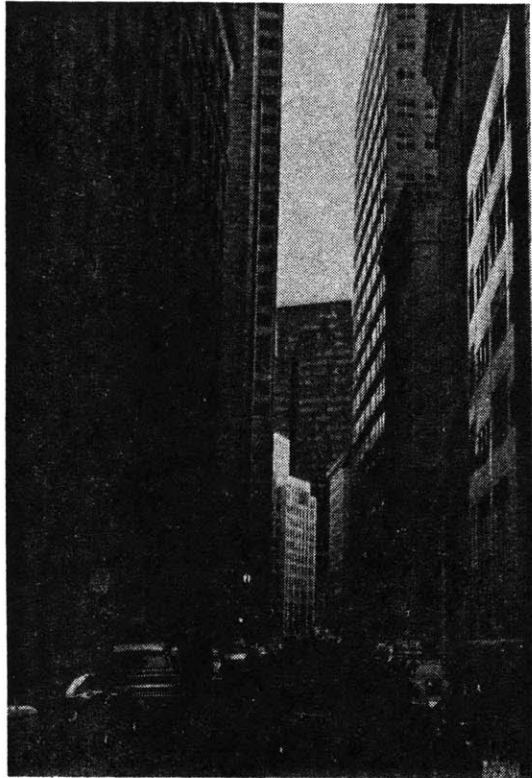
From a sociological point of view the street is a complex entity which reflects the changes in the cultural life of the city. The role of the street

has increasingly become more of a traffic channel, and less of a social locus, and furthermore has become increasingly standardized to serve that role. As Gloria Levitas writes (in "Anthropology and Sociology of Street" in the book "On Streets," ed. Anderson):

"It seems apparent that the definitions and differentiations of systems of streets have grown increasingly complex as society itself has increased in



3 Public Garden.



4 Street in Financial District.

complexity. Today, the role of the street and the nature and content of social interaction vary with class, ethnic group, age structures, and type of specialization of the neighborhood. It is clear, however, that increasing specialization and compartmentalization of society have removed indoors many of the socially

cohesive activities once found in the street. Entertainment, marketing, information, and personal services, once available on the street, are now rarely there. With suburbanization, streets have disappeared; the physical sidewalk is often narrowed to a foot path, and in some developments there is no sidewalk.

In central areas of the city, the situation is much the same; in high-rise apartments, firm boundaries between building and street serve to maintain separation. Only in the slum and in the dwindling ethnic enclaves and blue-collar areas does the street still seem to function partially as a locus for public life. In the ethnic enclaves it often exhibits processes reminiscent of the village in which a moral order and its attendant values are enforced through gossip passed along in street networks.

The evolution of technology with its attendant economic pressures and proliferation of formal institutions, and the encroachment on the street of municipal and state functions, suggests that the role of the street is now rarely visualized in terms of an immediate neighborhood: acting as a link rather than a locus, the street now serves to maintain the order of larger political entities. Increasingly, the street is recognized for its transit capabilities

rather than for its ability to provide a setting for a range of rich and diversified human behaviors. Social controls, sanctions, rules, and laws reflect national rather than local norms; only those segments of our society denied access to the general culture or those with currently atypical devotion to community identity can maintain a system of norms specific to the neighborhood." (p. 231,232)

"...maintenance of social interaction must now proceed without the familiar props of environmental necessity. If our technology does succeed in creating an automated society, man will no longer need to enmesh himself in a system of mutual social dependencies in order to get the work of his society done. He is thus potentially freed by technology to choose both the degree and nature of his social contacts., He is not yet free, however, of the processes of political authority which, as they have gradually absorbed the functions of his primary groups, have also encouraged development of smaller units of privacy and led to increasing isolation of human beings from one another. Man appears to be a social animal, requiring both physical contact and opportunity to learn from others; hence, increasing isolation appears to run counter to his nature. Indeed, psychological literature supports anthropology in attesting to the

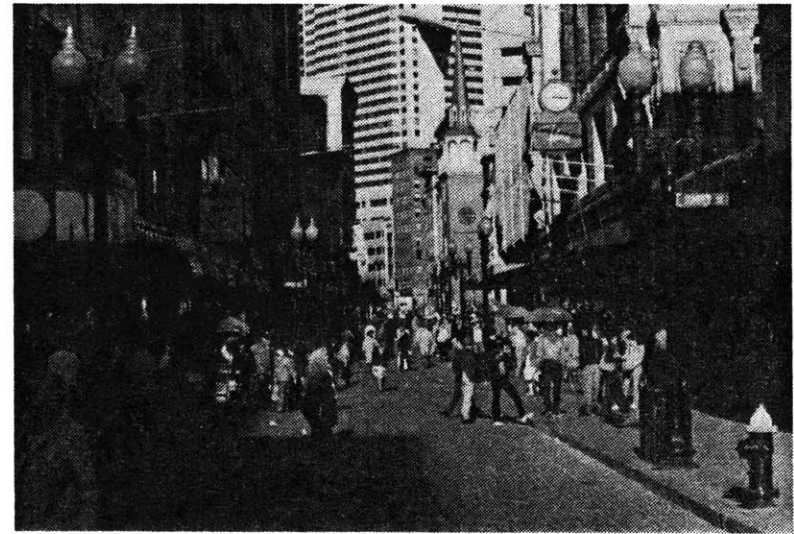
correlation between limited social networks and emotional instability. Man's sense of purpose and meaning derives from his relationships with others; if we remove the necessity of such relationships by providing a technology that supplies his wants, and a political system that imposes order upon him, we transform man from an active, inquisitive creature who makes himself into a passive victim of a self-created but all-powerful technocratic system. Our best attempts must be devoted to increasing social interaction. This can best be done not only by creating a physical environment that permits and encourages contact but by some attempts to restore the social and economic functions of primary groups by investing some of the power of the state in local organizations. Only in this way can we hope to maintain an organic basis for human cooperation. Without such a base, social interaction may become, as it often is now, a series of ritual gestures that operate to maintain spatial separation but fail to provide adequate satisfaction or meaning for their users." (p. 233)

There have always been mixed attitudes in society towards street - some pro and some con. But during the middle of the 20th century there were strong and prevalent anti-street attitudes particularly towards center-city streets. The streets were considered by

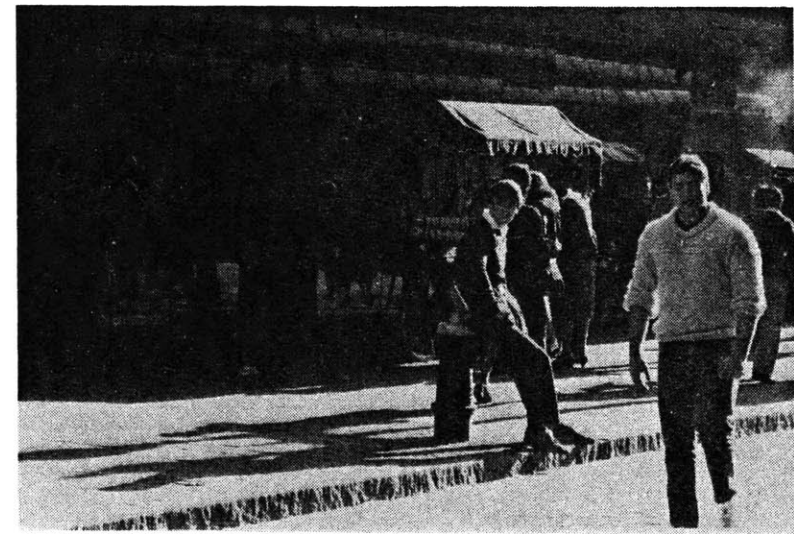
many to be dangerous, dirty, noisy, smelly and congested; and the increased mobility the automobile offered provided an escape.

The prevalence of the anti-street attitude, together with ever increasing demands for convenience services and facilities (including easy parking) and large, rapidly expanding, retail corporations, led to a boom in the development of shopping centers. These retail giants turned their backs to the street and created their own, highly controlled, internal environments. As they developed in the suburbs the older center-city retail establishments dwindled and decayed.

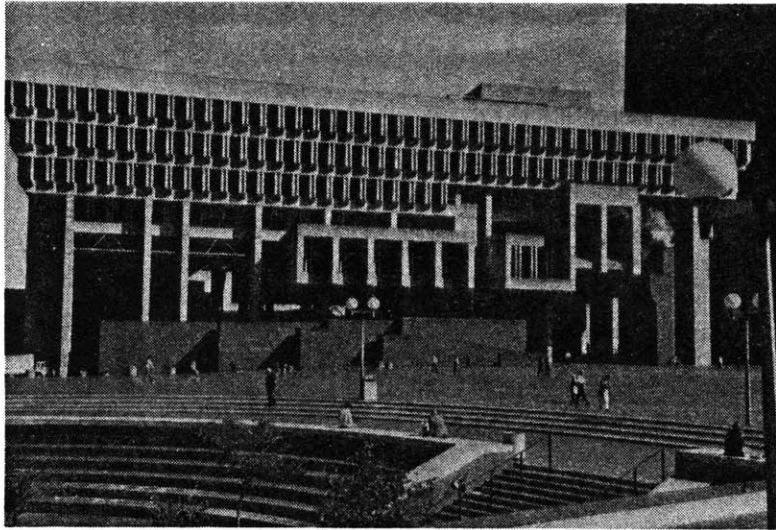
The late 1960s marked the beginning of efforts to reverse this trend in a number of cities, together with some change in societal attitudes. Recent developments in Boston, for example the Faneuil Hall Marketplace, the Downtown Crossing pedestrianization and the increase in the number of outdoor cafes, have proved tremendously popular. Similar efforts in a number of other cities have also tended to be tremendously popular.



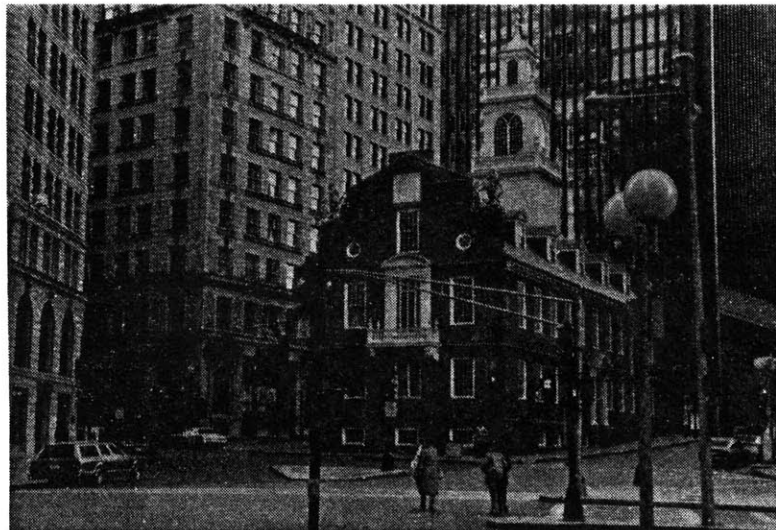
5 Washington Street - Downtown Crossing.



6 Washington Street - Downtown Crossing.



7 City Hall Plaza - a major node.



8 The Old State House - a minor node.

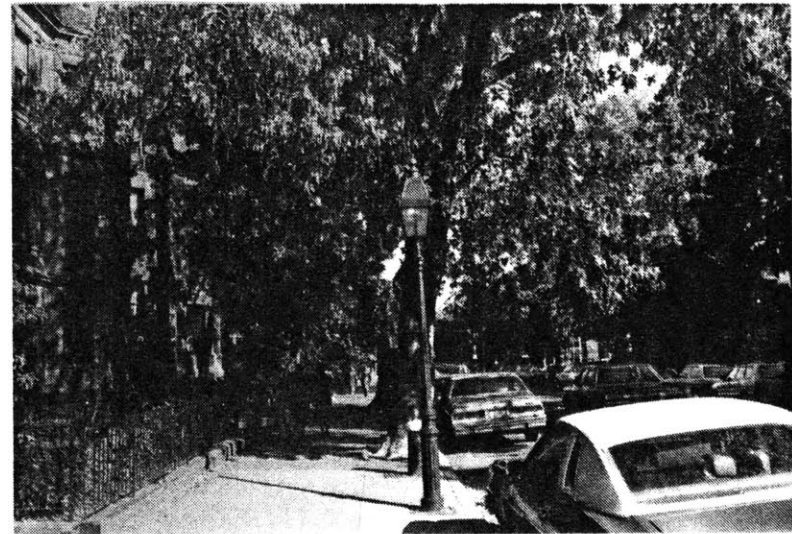
Developments such as the Faneuil Hall Marketplace are frequently criticized for being based upon petty commerce; however the petty commerce is not a likely reason for their popularity. Their popularity appears to be due more to their attractive pedestrian environments and their attempts to provide something more than just retail facilities. They attempt to be public places, similar to their predecessors - the public markets; it is unfortunate however that they are under private control. What is encouraging is that their popularity (and the popularity of other street improvements aimed at either enhancing street life or tapping its potentials) seems to indicate that the desire for social interaction in streets and plazas is very real and growing.

The ambivalence of current attitudes towards the street is reflected in Washington Street in Downtown Crossing. On one hand street life is being promoted through a variety of street improvements and the encouragement of street vendors and musicians; and on the other hand large retail developers are still leaning towards controlled internal environments and

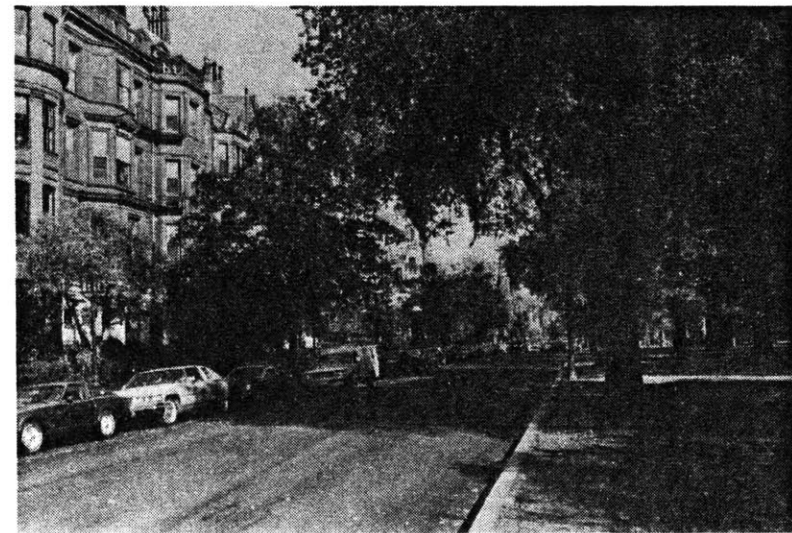
are largely ignoring their public street edges and the potentials of the street.

The public space of downtown Boston is, as with any city, unique to its particular circumstances - reflecting its physical environment and, even more, its cultural history. Although the public space reflects layers of successive changes in the physical development of the city its patterns remain much the same. Boston's downtown public space is particularly interesting to analyze because it dates back to the 17th century, reflecting a rich mix of cultural attitudes.

The major thrust of the thesis is the analysis of the physical and experiential qualities of public space in downtown Boston, focusing on Downtown Crossing. The parameters for structuring the analysis include: public space structure, form, edge, sensory qualities, access and circulation, street life, and urban landscape. These are defined and expounded in the analysis. Following the analysis is a chapter on design proposals, and again the approach was exploratory in nature. The limited



9 Marlborough Street - Back Bay.



10 Commonwealth Avenue - Back Bay.

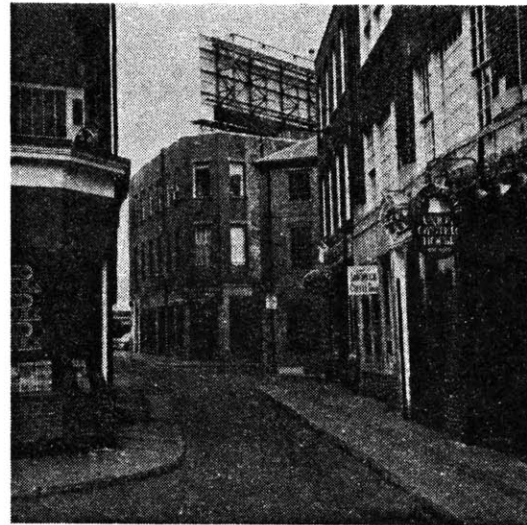
time available for the thesis simply did not permit much more than a first attempt in this respect, a fact which the reader should bear in mind.



11 Waterfront Park.



12 Winter Street - Downtown Crossing.



13 Blackstone Block - eighteenth century streets.

Analysis

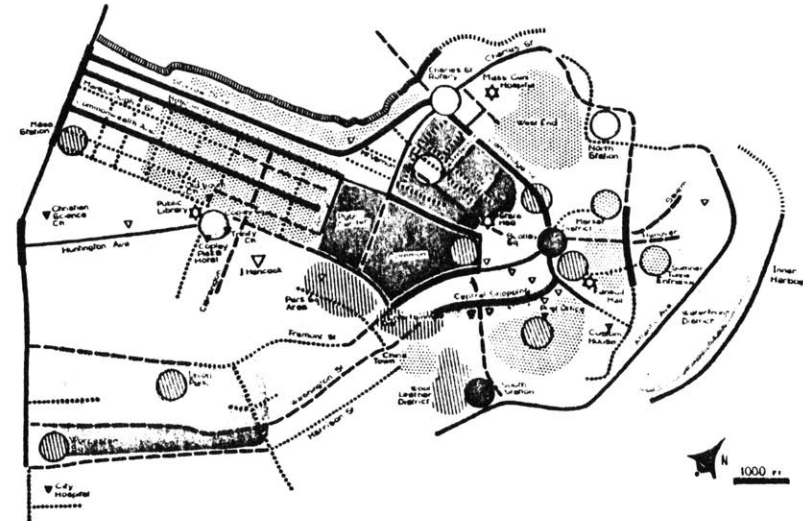
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STRUCTURE

Public open space in the city is composed of many different elements (streets, public alleys, urban plazas and squares, parks, promenades, public atriums and so on), which are interwoven to form a public network. The structure of public open space refers to its various elements, their interrelationships and the spatial pattern of the network.

This structure plays a major role in the formation of "public image" of the city. Paths, edges, nodes, districts and landmarks were identified as common elements of image by Kevin Lynch in his book, "The Image of the City." Paths and nodes are major elements of public open space structure, and the structure certainly has some relationship to the characteristics of the other elements: edges,

	PATH	EDGE	NODE	DISTRICT	LANDMARK
over 75% frequency					
50-75% "					
25-50% "					
12 1/2 - 25% "					



The Boston image as derived from verbal interviews

14 From: Kevin Lynch, "The Image of the City." districts and landmarks.

Structure is very much a product of history, and to understand the present structure one must trace its evolution. The physical form of Boston can be traced back to the 17th century. In retracing the evolution of the structure of public open space in the urban core, and associated built form patterns, one can gain some insight into the nature of the forces that shaped the present structure. An understanding of this evolution of spatial structure is highly beneficial, if not essential, when one is proposing

to modify the present structure of public open space.

The built form patterns of the city's core, in terms of figure-ground, from the time of the American Revolution to 1940 is shown incrementally in Figures 15 to 18. Several observations follow:

- (1) the strong influence of the original landform on the initial street structure,
- (2) the outward expansion of the city by landfilling into the sea, and the marshland of present day Back Bay,
- (3) the strong orientation in the 19th century to the sea with an extensive seafront-wharf development and the gradual shift from this orientation in the latter half of the 19th century,
- (4) the fine grain of built form that developed in the urban core in the 19th century,
- (5) the westward development of the city, associated with a more orderly, and less organic, street network as the city grew,
- (6) the early establishment of the Boston Common as a major public open space,
- (7) the early development of the street block



15 Central Boston, Figure-ground map - 1777.
(From: Central Boston Studio, Harvard Graduate School of Design, 1983).

- perimeters followed by a gradual infilling of the blocks in the urban core,
- (8) the changes to the street structure, for example the development of Atlantic Avenue in 1868, cutting a straight path across the old waterfront, and
 - (9) the remarkable endurance of the 18th and 19th centuries organic street structure to the middle of the 20th century, without major modification to the character of the structure. This is



16 Central Boston, Figure-ground map - 1852.

particularly interesting since it seems there may have been opportunities to restructure the streets in some areas, for example after the Great Fire of 1872 which devastated buildings over a wide area of the downtown core.

The changing nature of the blocks in the urban core can be seen in Figures 19a to 19d, which center around the retail core (Downtown Crossing). The loosely defined streets of the 18th century became



17 Central Boston, Figure-ground map - 1888.

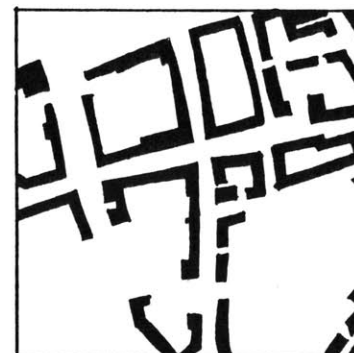
progressively defined and intensified as unbuilt spaces became built. The extensive infilling of the interiors of the blocks reduced the interior open spaces of most blocks to narrow alleys. Some alleys provided access through their blocks, and in certain instances connected to other alleys; others simply dead-ended in the block.

Radical public interventions into the public open space structure occurred in the middle of the 20th



18 Central Boston, Figure-ground map - 1940.

century. The change between 1940 and 1980 can be seen in the axonometric drawings of the downtown, Figures 20 and 21. The Fitzgerald Expressway resulted in an extensive gash in the fine grain of the core and imposed a barrier between the downtown and the waterfront. Similarly the Storrow Drive Expressway separated Back Bay streets from the Charles River esplanade. The fabric and street structure of the West End were obliterated in a major urban renewal project in the late 1950s, and replaced by a very



a 1777



b 1852



c 1888



d 1940

19 Historic growth of blocks in Downtown Crossing, 1777-1940.

different structure and fabric.

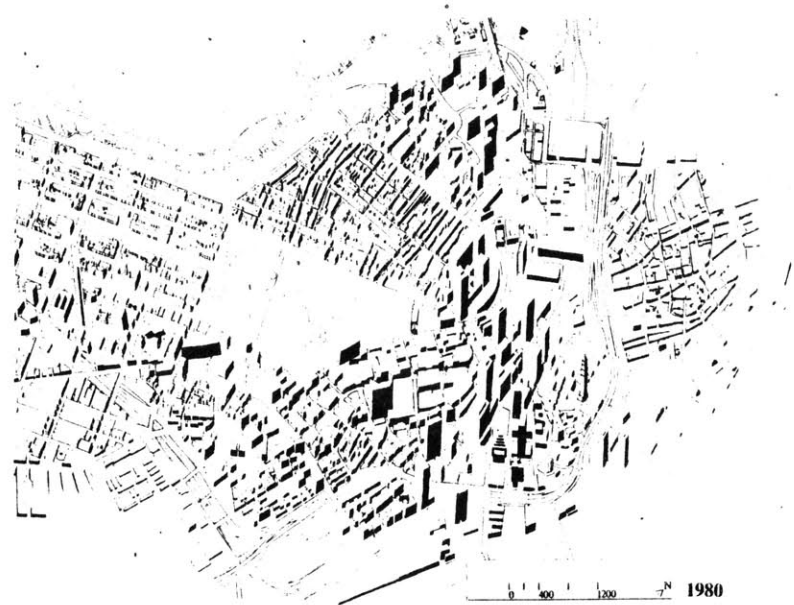
The Scollay Square area, the focal point of the radial street structure in the urban core was reduced from 22 to just 6 streets. High-rise towers sprouted up in the Government Center District, the Financial District, the West End and along Boylston Street, which although generally not changing the major structure of public open space changed the qualities,

or characters, of the streets, the fine fabric of the built form, and the delicate network of alleys in the block interiors.

Perceptions and images of public open space transformed. Boston, in the 17th and early 18th centuries, was a colonial port surrounded by wilderness, and the center of public activity was along King Street and Long Wharf. There were no

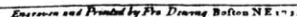


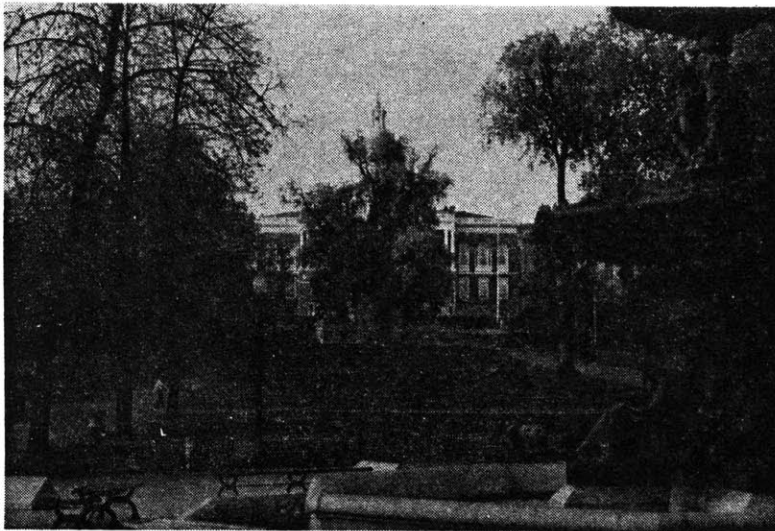
20 Central Boston, Axonometric drawing - 1940.
(From: Central Boston Studio, Harvard Graduate School of Design, 1983).



21 Central Boston, Axonometric drawing - 1980.

out that in 1802 a law was passed restricting buildings over 10 feet in height to be built of brick or stone and covered with slate, tile or other





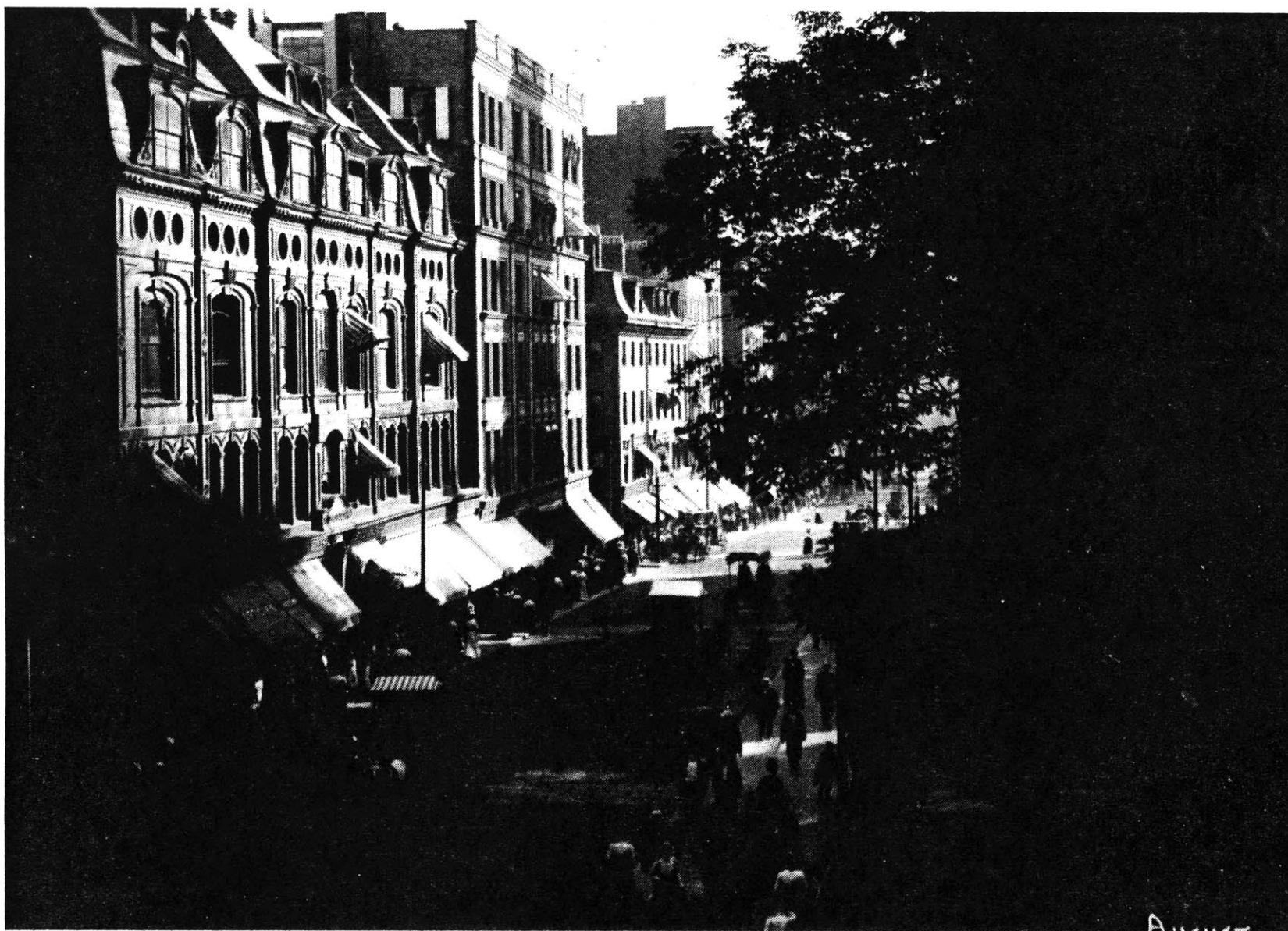
23 Boston Common.

non-combustible material. The Common was used according to Whitehill, (in "Boston, A Topographical History"), for "pasturing cattle, training military companies and hanging unwelcome Quakers, as well as for the promenades..." (p. 35) John Bonner's map of Boston in 1772 (Figure 22) is an excellent representation of the structure, form and to some extent character of the public open space network of that time.

Places of public activity included markets, churches, meeting halls and of course streets. The idea of

formal public open places, in particular parks, came about in Boston in the early 19th century. This image was promoted by Charles Bulfinch following the building of the State House, and an elegant row of townhouses on Tremont Street. Development of the Boston Common as a park ensued. The image of formal, and "grande," public areas remained with the city, and considerable public investment went into the development of the Public Garden, Commonwealth Avenue, the Charles River esplanade and the Emerald Necklace park system.

The general loss of vitality in the downtown, towards the middle of the 20th century, associated with the major suburban movement of that time, and negative image of city centers, resulted in a major deterioration of the qualities of public open space in the downtown. Tremont Street, early in the 20th century a prestigious retail street with a fashionable promenade along the Common (Figures 24 and 25), lost its popularity and went through an economic and physical decline. Scollay Square went through a similar economic and physical decline until it was demolished in an urban renewal project in the late 1960s.



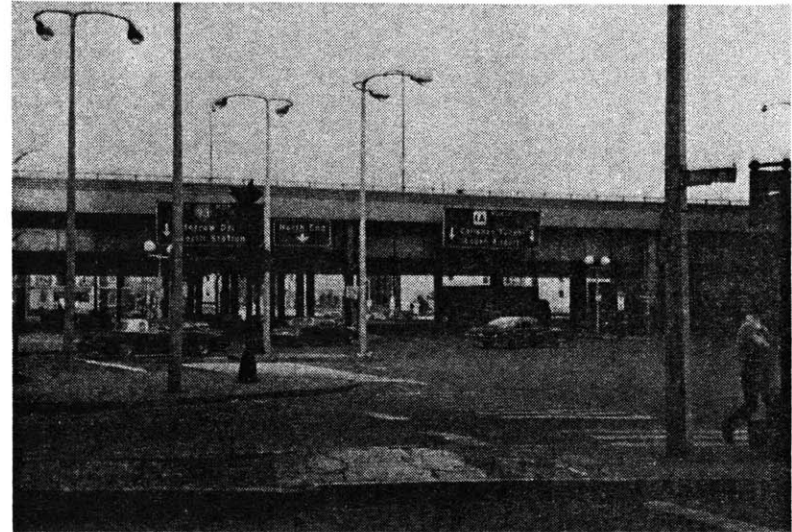
24 Tremont Street in 1899. (Courtesy: Society for the Preservation of New England Antiquities)



25 Tremont Street along the Boston Common c.1900. (Courtesy: Society for the Preservation of New England Antiquities)

Little public investment was made to improve, or even maintain, the public open space structure in the downtown. A drastic imposition to the structure occurred when expressways were crudely cut through the downtown to accommodate suburban commuters. Many street connections were severed, in particular downtown connections to the waterfront, the Charles River esplanade and the North End. Where physical connections were made between districts, the expressways were often psychological barriers to movement, as is the case with the North End.

The downtown has recently rebounded with a new vitality, spurred by major urban renewal efforts of the city and a booming office space market. The Faneuil Hall Marketplace, City Hall, Harbor Towers, New England Aquarium, Waterfront Park, numerous adaptive reuse projects, and high-rise towers, an interesting although sometimes conflicting intermix of old and new architecture, changed the public image of the urban core. The Faneuil Hall Marketplace, an adaptive reuse development by the Rouse Company, under an agreement with the City of Boston, is the heaviest used "public place" in Boston. As Donlyn Lyndon puts it, (in "The City Observed: Boston"),



26 Fitzgerald Expressway separating the North End from the downtown.



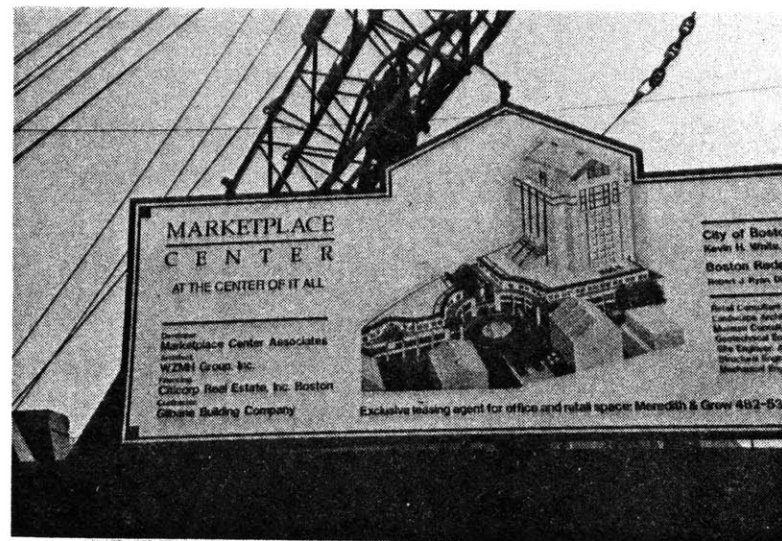
27 Faneuil Hall Marketplace.



28 Pedestrian streets at the Faneuil Hall Marketplace.

"...development of these buildings into a center-city emporium has been wildly successful. It throbs with people almost all through the day, every day, and it has created a new heart of the city, one that is popular with denizens of the suburbs and tourists, one where petty commerce offers a ready excuse for being with others." (p. 43, 44)

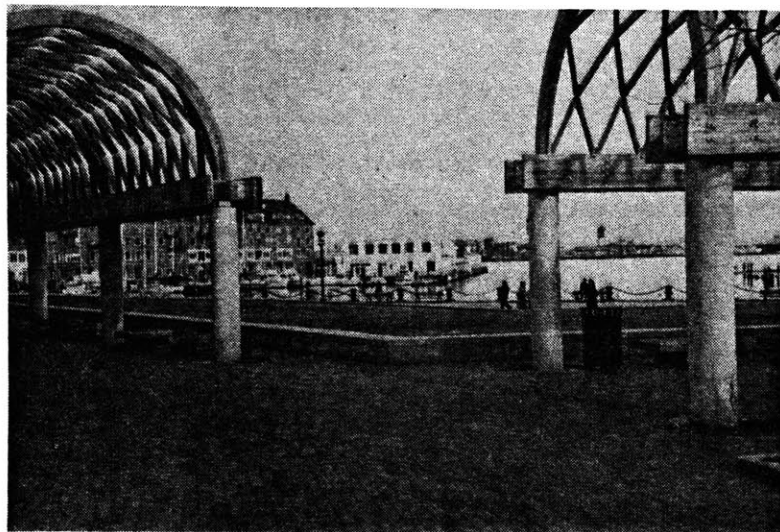
The development can potentially integrate well, and is a nodal point, in the public open space structure of the city. It is an integral part of the "walk to the sea," a path proposed in the 1950s, from the State House to the waterfront, by Kevin Lynch and



29 Extension of pedestrian street at Faneuil Hall Marketplace towards ocean - part of the "walk to the sea."

Jack Myer. The two linear non-enclosed pedestrian streets of the Marketplace have an open connection to surrounding streets, reinforcing their sense of publicness.

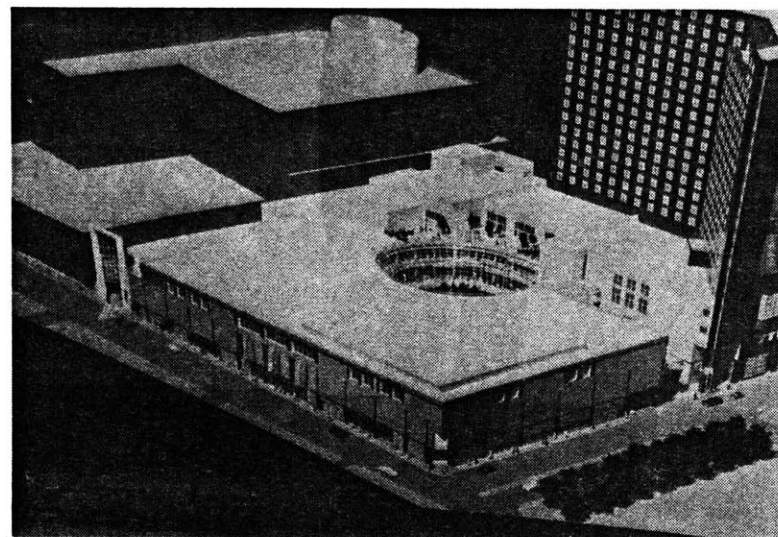
A pedestrian bridge was planned to connect City Hall Plaza to the base of the new office tower at 60 State Street, adjacent to Faneuil Hall, to provide an attractive pedestrian connection across Congress Street. Although both City Hall Plaza and the building base of 60 State Street were designed specifically for the bridge it was unfortunately



30 Waterfront Park.

never built, and pedestrians now use a crosswalk on Congress Street.

A recent phenomenon in Boston, as in several other American cities plagued by financial problems, has been the extensive use of private developers to provide "public spaces" in exchange for expanded development rights. These include for example plazas at the foot of office towers and certain internal open spaces in large retail or multi-use complexes. Major problems with this practice have been inappropriate contextual relationships and insensi-



31 Model of Lafayette Place - under construction.

tive building designs and management practices, producing undesirable places, with sometimes very limited accessibility. These problems in New York have resulted in revisions to the zoning ordinance.

Another phenomenon which poses an integrative problem with the public space structure, particularly retail streets, is the development of large internally oriented retail or multi-use complexes. These have tended to have little sensitivity to the streets on which they face, and have drastically altered the ambience of those streets.

The present structure in downtown Boston is the result of centuries of incremental growth and transformation. The older organic street network was structured to serve a city very different from that of today. Yet by modification and adaptation the structure continues to work reasonably well, despite its problems.

The structure is highly suited to pedestrians. Firstly, it was in place prior to the onset of automobiles and therefore was designed for pedestrian circulation. Secondly, the organic nature of its development has a fine grain and some interesting sequences of spaces. Thirdly, the structure is compact; most places in the downtown are within a 20 minute walk of Downtown Crossing. Fourthly, the structure is connected to highly pedestrian oriented districts. Fifthly, the structure has a rich mix of elements - from narrow, winding alleys to wide promenade, from small plaza (or square) formed by odd street intersections to the expansive City Hall Plaza, and from the pastoral expanse of the Public Garden and Common to the dramatic expanse of the Atlantic Ocean.

The organic street network is less suited to internal automobile circulation due to its irregular and confusing street pattern. Peripheral arterials and expressways however provide a high level of access to the downtown structure.

The future development of the structure should include a connected series of public places along the waterfront from the North End to the Fort Point Channel District, which seems to be the intent of the City. With major mixed use development, and

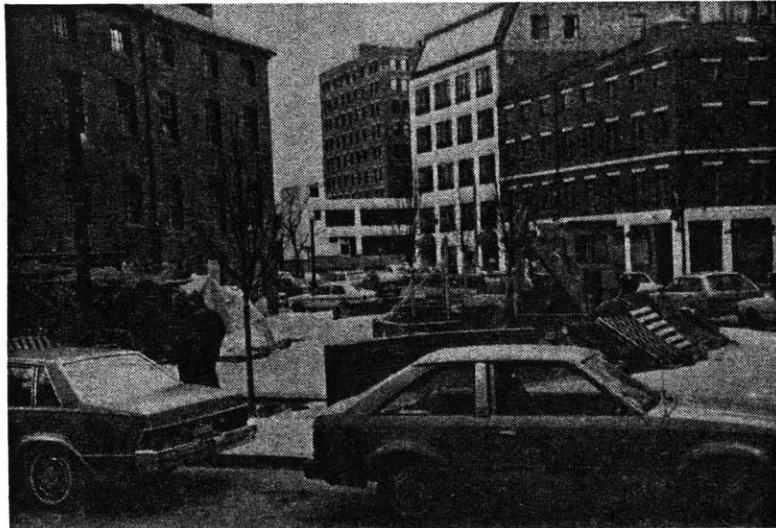


32 Post Office Square - a minor node.

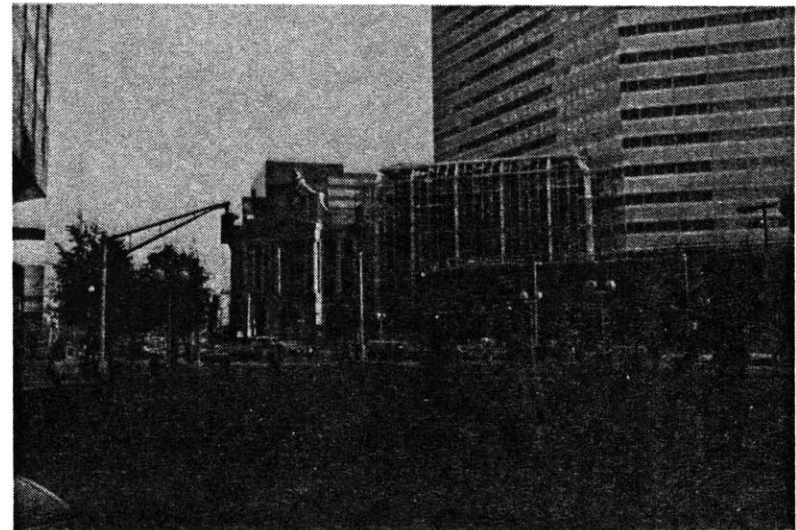
redevelopment, planned for the Fort Point Channel District the development of Summer Street as a major public-retail street, extending into the Fort Point Channel District, would provide a major public link between the two districts.

The City of Boston recently published a plan for the retail core of the City, ("Downtown Crossing: An Economic Strategy Plan, Boston's Vision of the Future"), indicating current intentions for physical improvements to the retail core. Figure 35 shows the

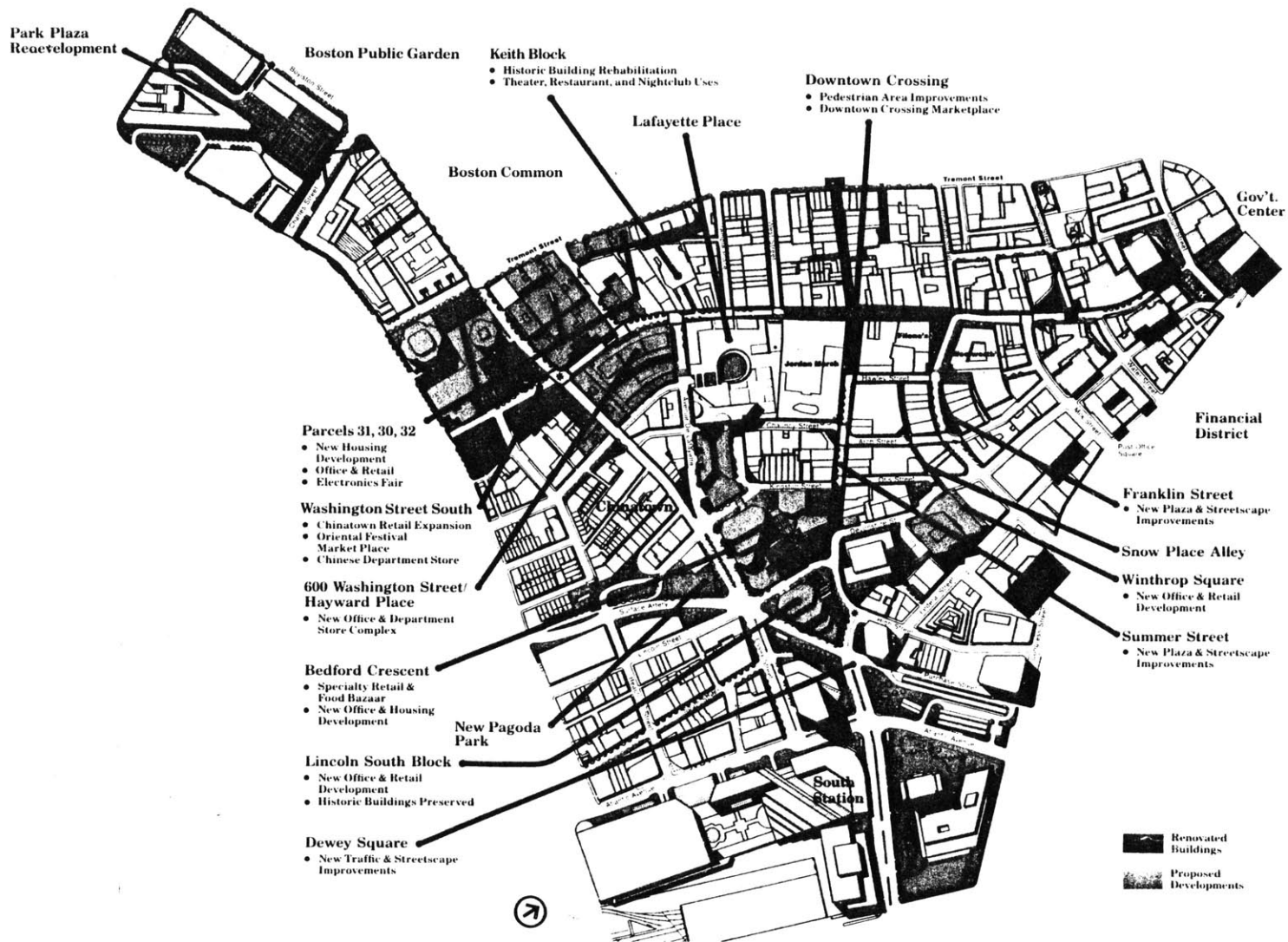
general strategy plan for the physical improvements and indicates the City's proposed improvements to public open space in the retail core. A strengthening of the Summer Street linkage is proposed, to connect Downtown Crossing and the South Station area. This has historically been an important link. Washington Street, another historically important open space (or street), link is presently being strengthened by a major new retail development, Lafayette Place; and future major retail development is foreseen to the south of Lafayette Place. The



33 Small plaza under construction adjacent to Custom House Tower.



34 South Station - a major node.



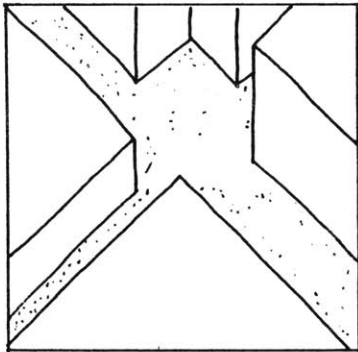
35 Physical improvement strategy for Downtown Crossing.
 (From: "Downtown Crossing - An Economic Strategy Plan," by the
 City of Boston/Boston Redevelopment Authority)

plan also recognizes the importance of the Government Center, and Faneuil Hall Marketplace, linkage to the north end of Washington Street.

Some decisions in the plan however are not clear, for example why the pedestrian zone was not extended along Washington Street and along more of the "ladder" streets. The plan is too general to provide much sense of the "desired qualities" of the public open space system in the downtown. Further planning, and on a broader scale, is obviously necessary to effectively improve the functional and imageable qualities of the public open space system.

FORM

The public open space structure has spatial form, which is visually apparent where the open space has some degree of enclosure. Generally, the enclosure elements are buildings, but they also include trees, walls and vertical elements such as light standards. The form of a street or plaza becomes less apparent as the degree of enclosure is reduced. Streets, street intersections, plazas, parks, and other elements of structure can all be analyzed in terms of their form characteristics.



36 Enclosure produces form.

The form of a street or a plaza is shaped by the height and separation of the enclosure elements. Certain streets, for example Winter Street, have very canyon-like forms because of their narrow width and



Cornhill bookshops in 1916; wood engraving by Rudolph Ruzicka.

high edges. An interesting observation on Winter Street is that although many buildings along it are five stories or less, particularly in the mid-block, the form is defined by the taller end buildings (8 to 11 stories) of the street. As the width to height ratio increases, the sense of openness increases.

Another form quality is scale, and an often used measure in architecture is the size relative to human dimensions. The form of a narrow alley invokes, as most people have experienced, a very different spatial sensation than, for example, a street in the financial district with a similar width-height-depth proportion.

Enclosure, producing volumetric form in open space, enhances the sense of "place," and is thus a major element in the development of particular places like plazas. Looking westward along Summer Street (Figure 38), the shift in alignment of Summer and Winter Streets results in a partial end-enclosure.

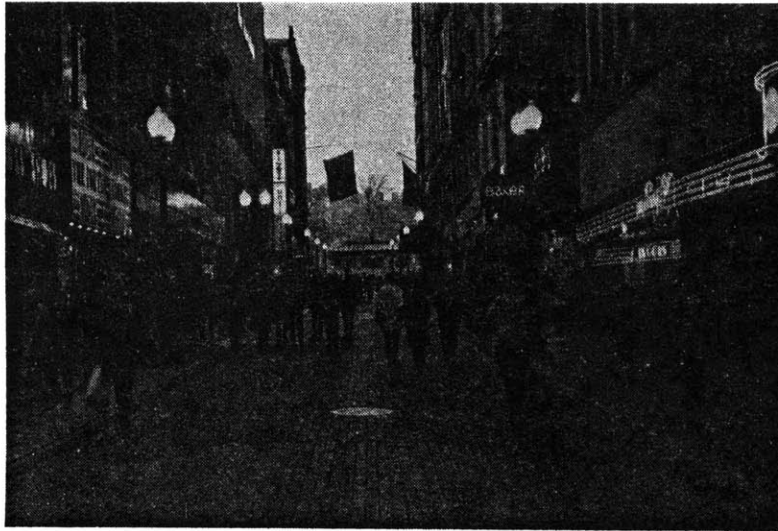
◀ **37** Continuous edge produces the strongest form definition, reinforcing the street pattern.



38 Partial end-enclosure on Summer Street.

This characteristic gives the sitting area between the Jordan Marsh and Filene's buildings more of a sense of place. One might imagine what this area would be like without this partial end-enclosure.

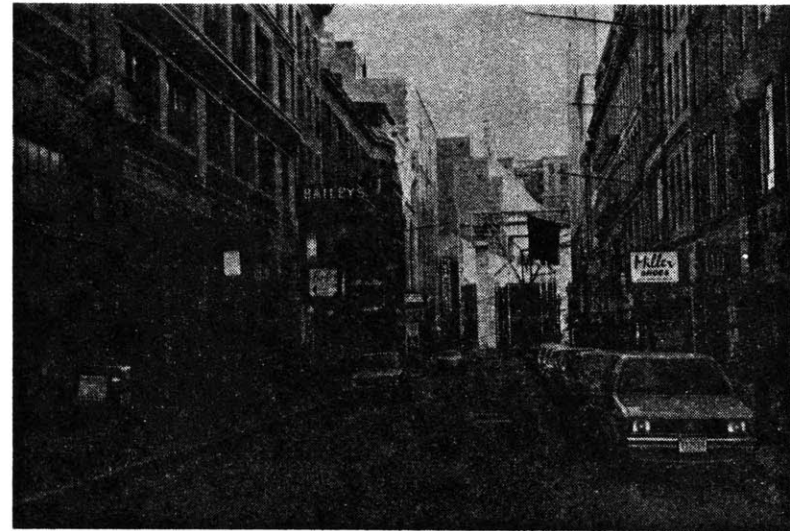
The "ladder streets," short streets between Tremont and Washington Streets, have this enclosure quality. They are, however, very canyon-like in form which works against the place making quality of enclosure. Tremont Street, on the other hand, is defined by buildings on its east side and is open to the Common on its west side. The "place" qualities of Tremont



39 "Ladder" street - Winter St.

Street, along the Common, are, as illustrated in Figure 42, strongly affected by the "place" qualities of the Common. The form spreads out to include the Common.

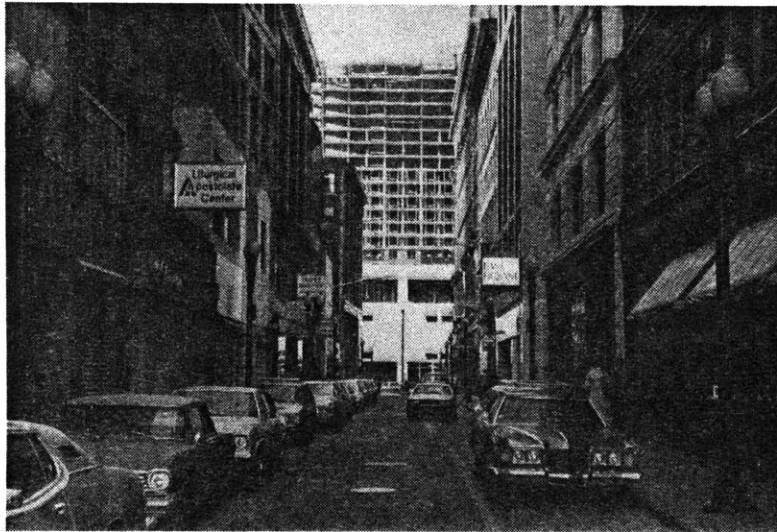
Another aspect of the form of Tremont Street is that, although its alignment changes slightly, the lineal form is very open-ended which produces more sense of the street as a channel. Washington Street has a somewhat similar sense of channel; however its direction changes do seem to produce more end-closure. Washington Street is bordered on both



40 "Ladder" street - Temple St.

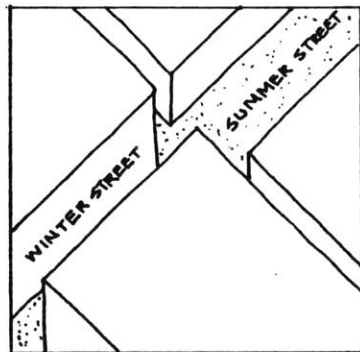
sides by buildings, resulting in a different form characteristic than Tremont Street.

The sequence of forms is an important consideration in the design of open space. The sequence of travelling from a narrow street to an opening, for example a plaza, gives the plaza a sense of spaciousness. A wider street opening into the same plaza would produce less sense of spaciousness. Contrast emphasizes difference. The sequence of going from Winter Street, narrow and high, to Summer Street, wide and low, has this effect. This contrast

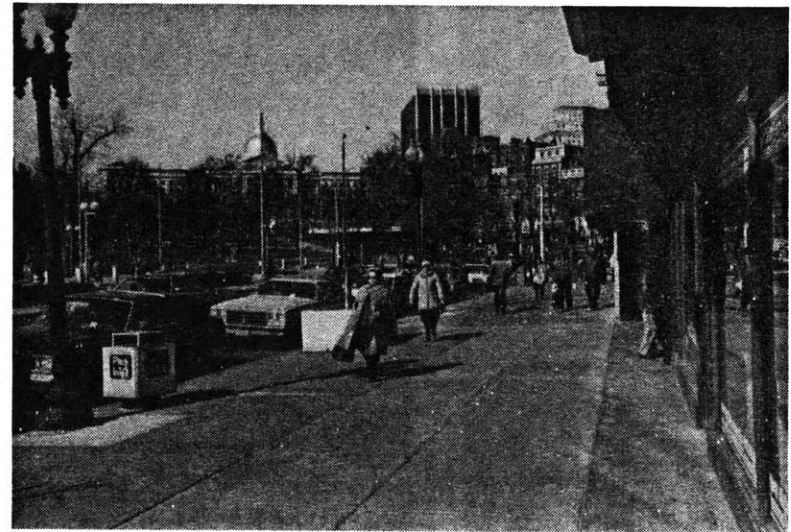


41 "Ladder" street - West St.

further aids in the "place making" of the nodal intersection of Washington and Summer/Winter Streets.



43 Sequence - Winter to Summer Streets.



42 Tremont Street

The forms of certain nodal areas in Downtown Crossing are not particularly conducive to the activity patterns occurring there. The 100% Corner (the Washington and Summer/Winter Streets intersection) functions in many respects like a small plaza, although the form of the intersection is not a strong support of this function. Similarly there is a misfit between form and function in the small park at Washington and Franklin Streets. More enclosure would help in this case.

The forms of nodal areas in the downtown are

typically not planned; their origins are generally the result of odd shaped street intersections, to which particular functions became attached. These are cases where functions have adapted to form.

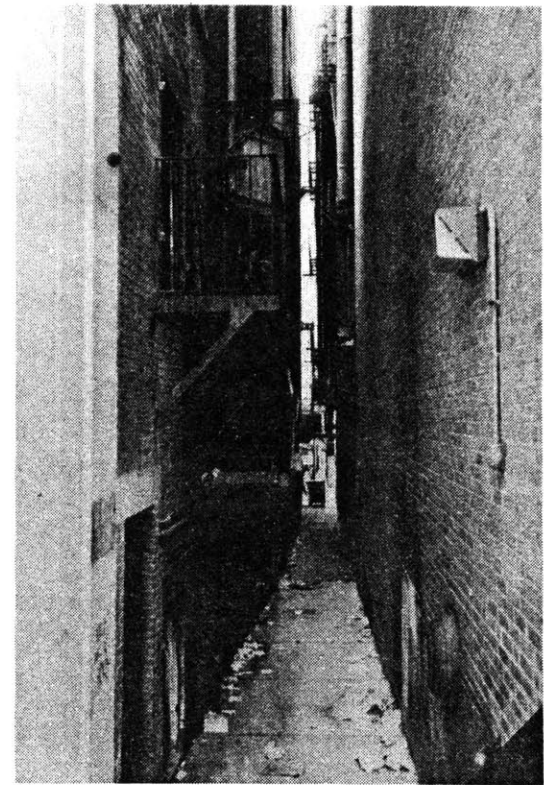
At the smaller scale, certain alleys have forms which have resulted in functional problems. In some cases, (Figure 45), the form has severely restricted function, even pedestrian circulation. Alleys that dead-end are often "dead spaces," (Figure 46). Certain other alleys, that form part of a circulation

system, and are sufficiently wide, can accommodate a range of function and tend to be less problematic, (Figures 47 and 48).

Another dimension of form is change. The form of the Downtown Crossing area has not changed substantially

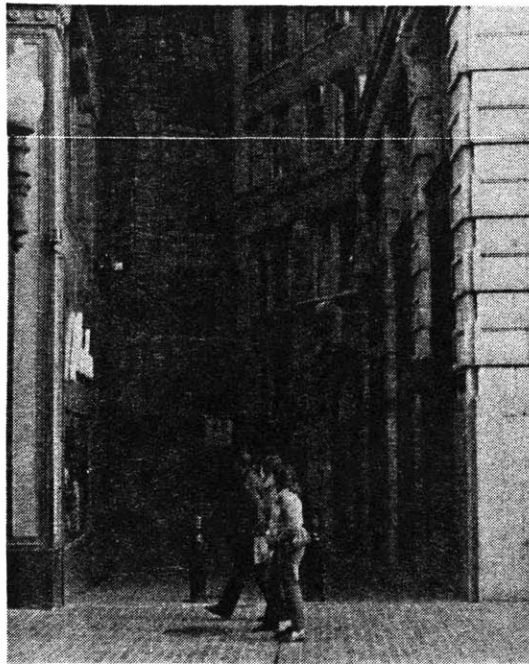


44 Winthrop Square.

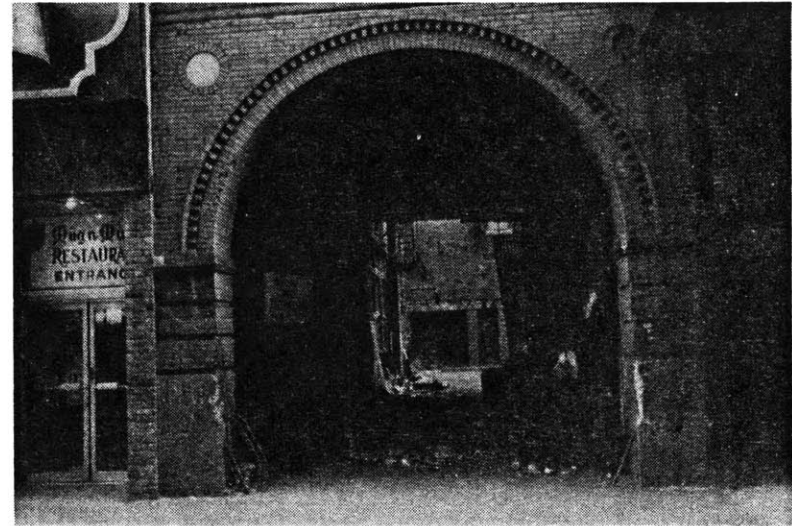


45 A problematic form.

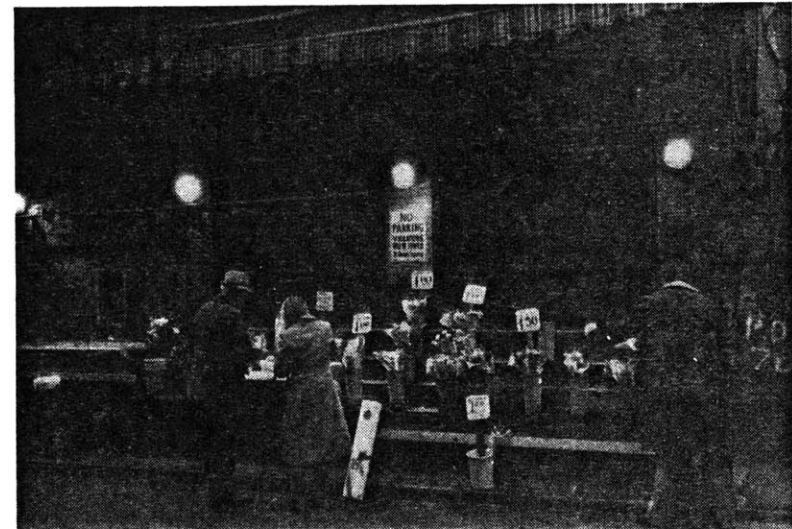
since the 19th century, which is one of its appealing characteristics to pedestrians. The development of buildings to their present zoning limit would change the form of the open space they enclose. As can be visualized in Figure 49, a build-to-limit scenario would intensify the canyon-like qualities of the ladder streets.



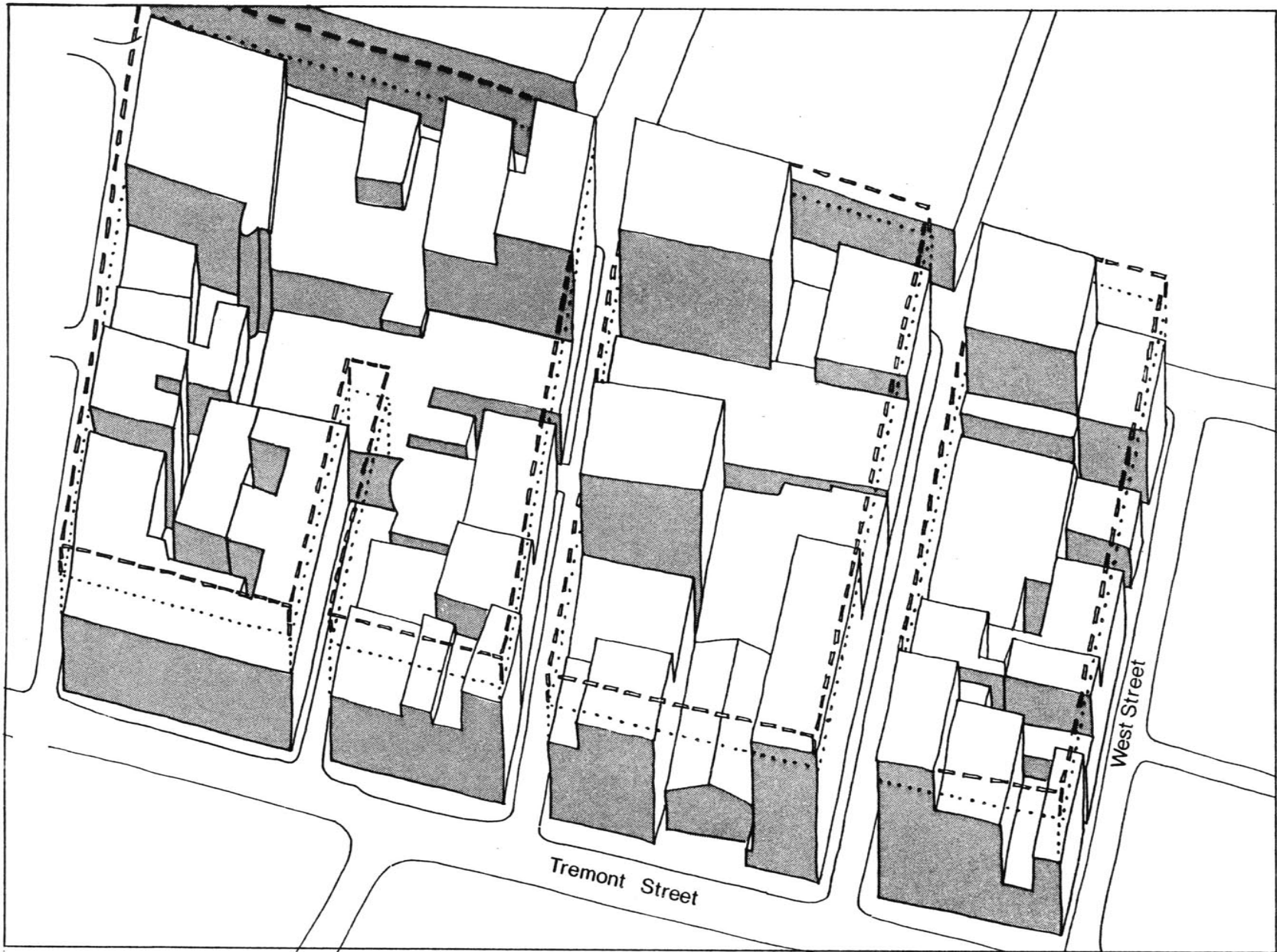
47 Spring Lane - a small pedestrian street.



46 A dead-end alley.



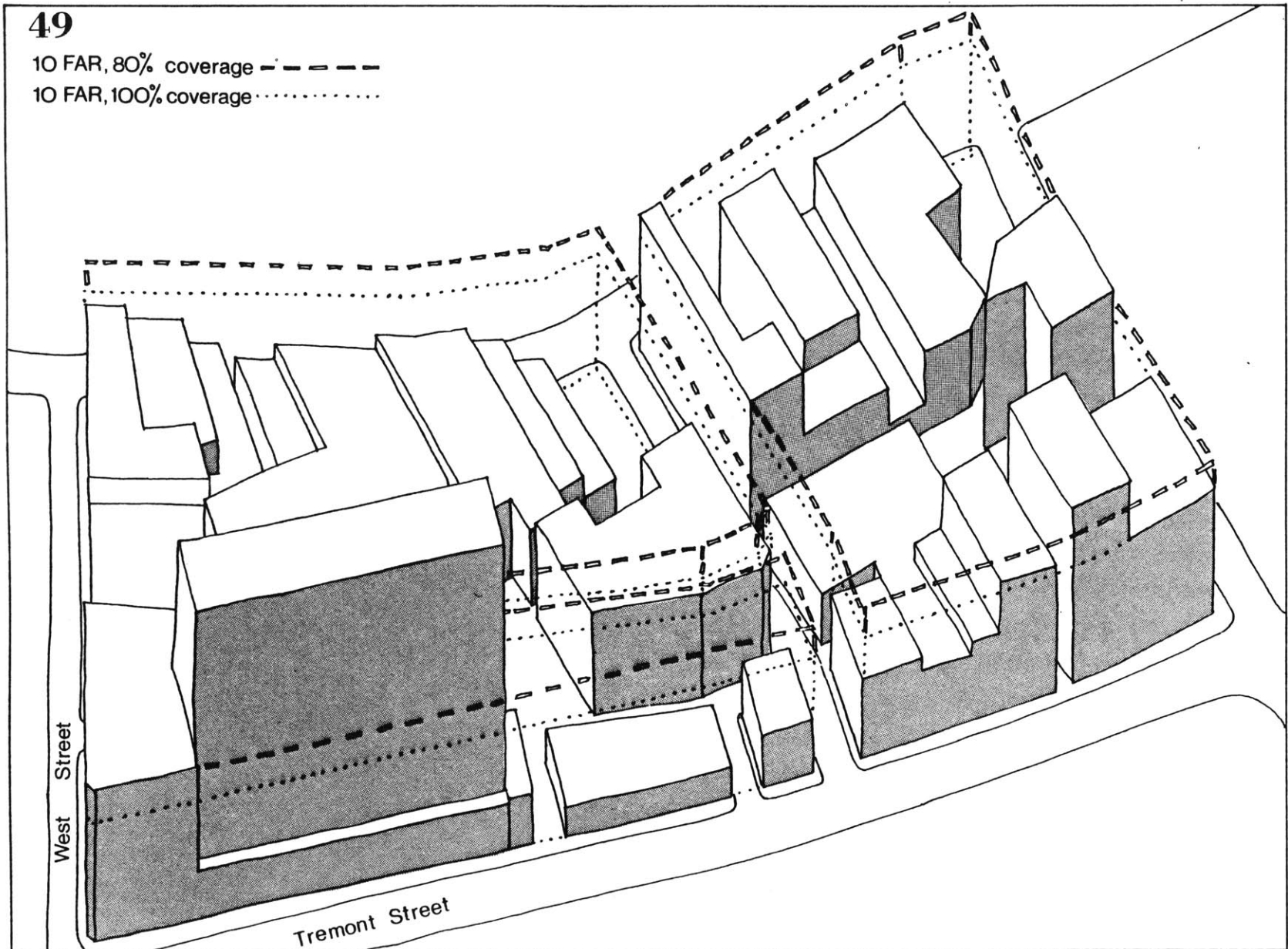
48 Snow Alley - this short-cut supports street vendors.



49

10 FAR, 80% coverage - - - - -

10 FAR, 100% coverage ······

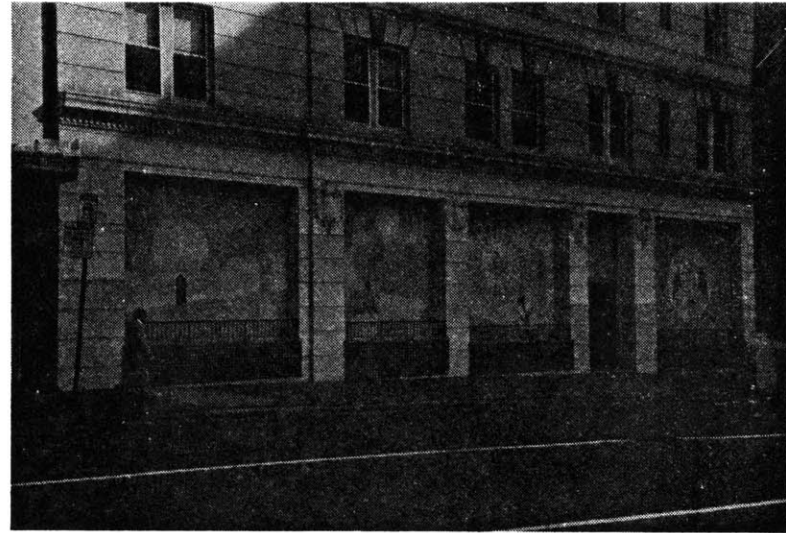


EDGE

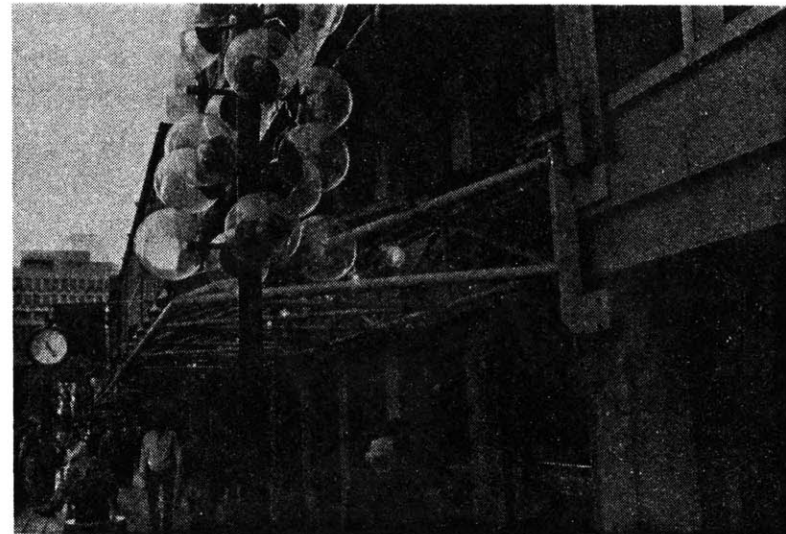
Edge refers to the interface between the form of the public open space and the form of the bordering buildings. It is the boundary between public and private territories. The distinction, however, between public and private spaces is often not sharp, and can be considered more a matter of degree of publicness or privateness. This phenomenon is shown for a portion of Downtown Crossing in Figure 54.

In some cases the edge is a "hard edge," where there is a sharp physical separation of territories, (Figure 50). In other cases there is a transition space between the building and the public space defining an intermediate zone. Partial enclosure from architectural elements such as canopies impart form to this zone, (Figures 51 and 52). The partial definition of form then has both qualities of the public open space and qualities of the building.

The particular qualities of the edge have a major influence on the types and amount of public activity along both the edge and the adjoining public space.

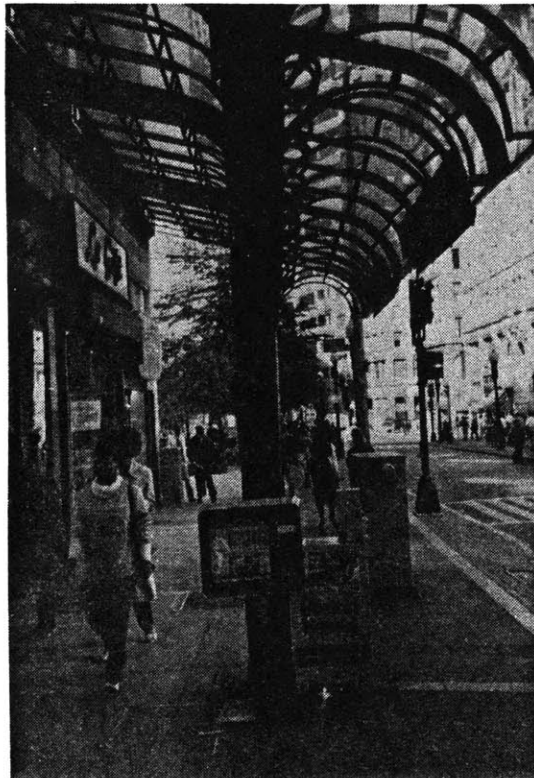


50 A "hard" edge.



51 Canopies define a transitional space or zone.

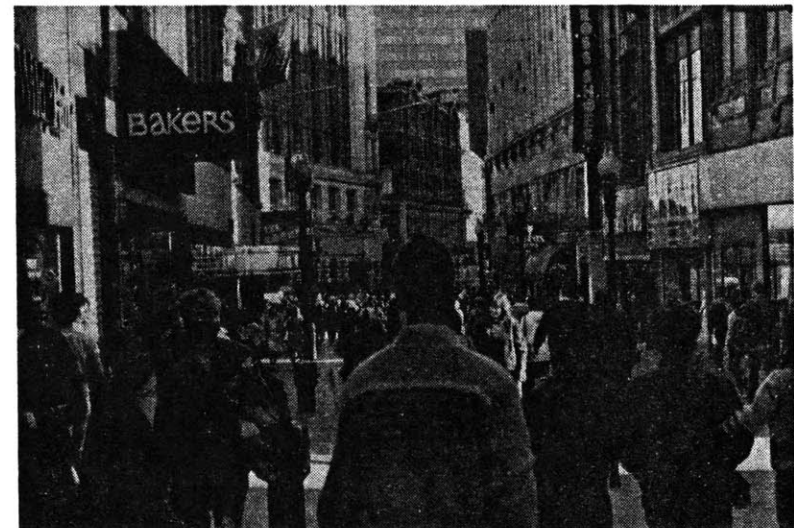
Retail edges tend to generate high levels of activity associated with shopping, assuming the market is there; and restaurants, snack food outlets, outdoor cafes and bars can be extremely high activity generators. Banks, insurance companies and offices are examples which generate little activity.



52 Transitional space along Washington Street.

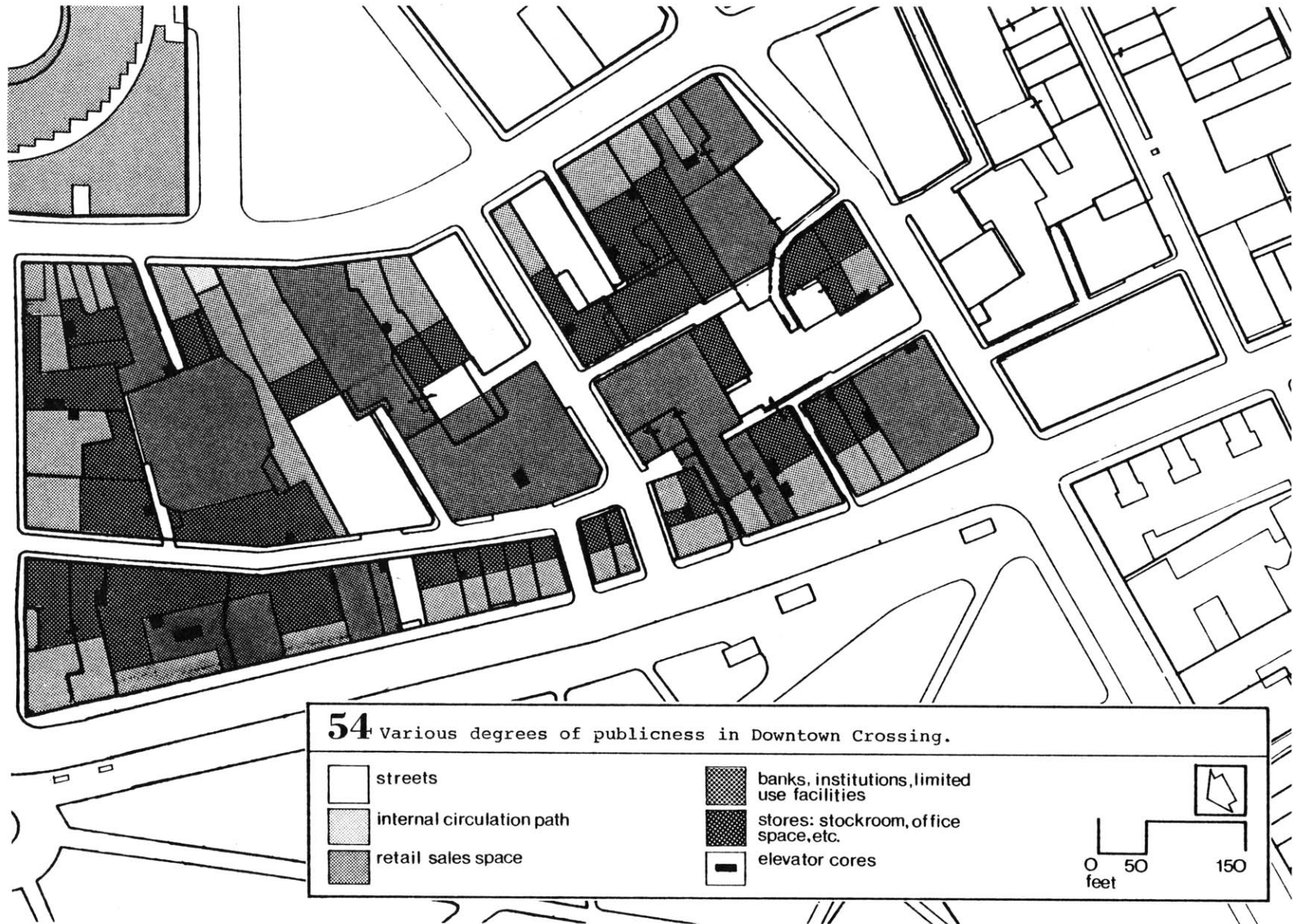
Important qualities of retail edges include transparency, penetrability, variegation, indentation, transitional zone and architectural elements for weather protection. To further encourage public activity in a retail street a variety of activity supports could be added; benches, telephones, niches for street entertainers and vendors, small plazas, and so on, attracting a wider range of users. The activities generated often act synergistically.

Retail activity in Downtown Crossing occurs primarily at the street level, although there are a number of

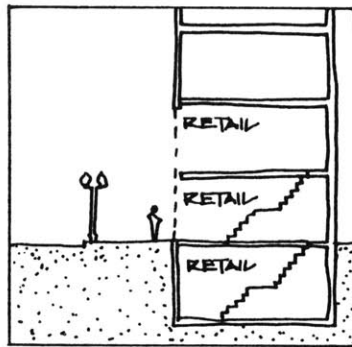


53 Winter Street - a highly penetrable retail edge.



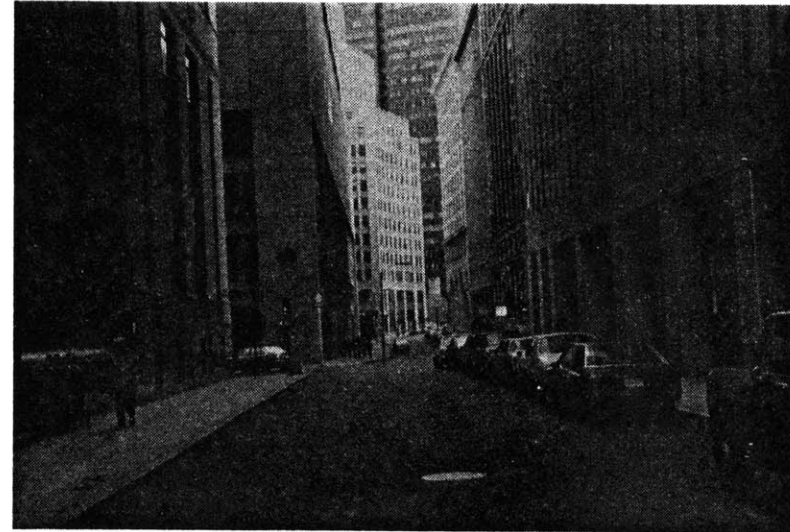


cases where this has been extended to the second story. Department stores typically have internal circulation systems which extend retail activity several stories. In the case of smaller retailers, expansion, as Figure 55 indicates, could potentially include three stories within an individual store.



55 Potential retail levels.

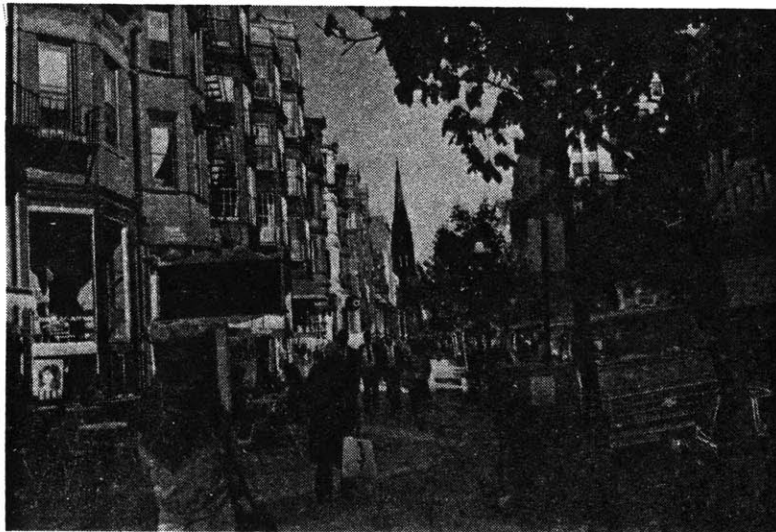
In contrast to retail edges, the edges of the financial district have qualities which impart very limited interaction between the public and private territories, (Figure 56). The edges tend to be "hard," in both form and material; they have little penetrability, variegation and indentation; there tends to be little transitional space; and weather protection along the street is typically not provided. The edge tends not to support public



56 Typical edges in Financial District.

activity and the function of the street is essentially limited to a transportation corridor.

The form of the edge can act to enhance public activity along it. The indentations in edge for example along Newbury Street tend to support the activities along it - for example, window shopping in the many specialty shops or eating and relaxing in outdoor cafes, (Figure 57). Many retail stores in the downtown provide some form of transitional space, alongside circulation paths, to encourage window shopping.



57 Edge indentation on Newbury Street provides niches for street related activities.

Transparency along retail edges provides a number of functions: it communicates the nature of the activity inside, exhibits retail goods, and provides a sense of openness or publicness. The transparency is sometimes limited to a display window, (Figure 58), while in other cases, for example in the Faneuil Hall Marketplace, the entire retail portion of the store sometimes becomes the "window," (Figure 59).

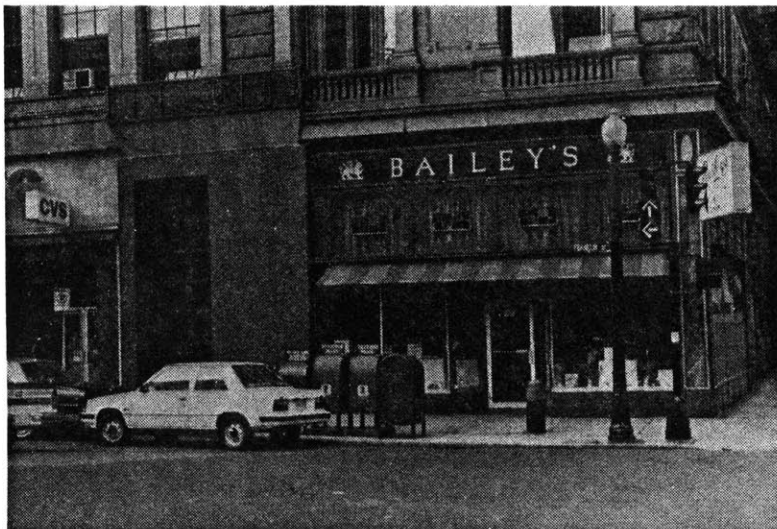
A variety of enclosure elements for weather protection in the transitional zone are used in the



58 Limited transparency.

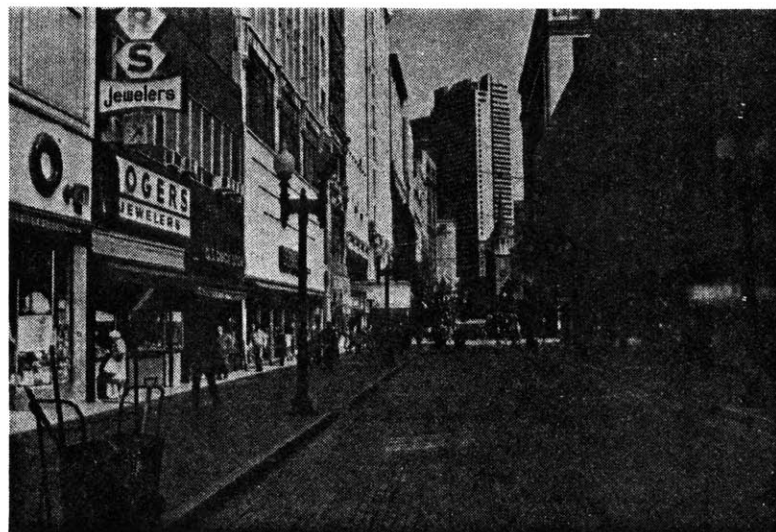


59 High transparency.



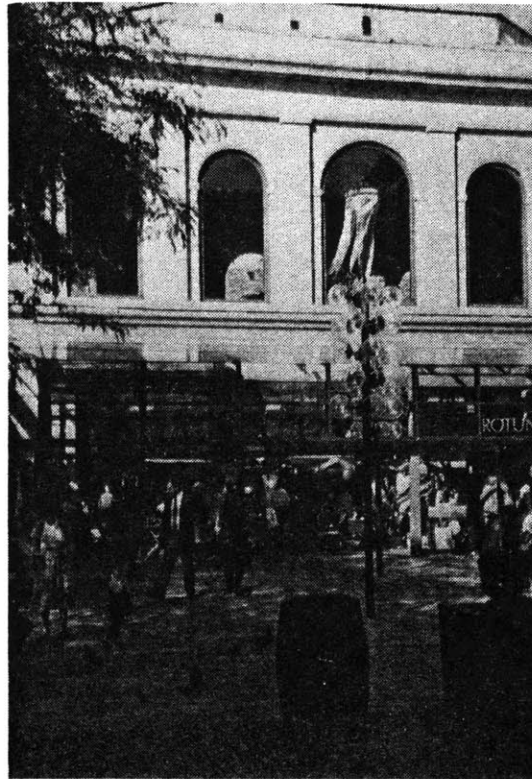
60 Minimal protection from rain.

downtown, affording varying levels of physical comfort from adverse rain, wind and cold conditions, (Figure 60, 61, 62 and 63). North Washington Street in Downtown Crossing and the Faneuil Hall Marketplace have examples of efforts to provide consistent enclosures from weather. Elsewhere efforts by individual building owners and retailers have varied from providing no protective elements to large protective elements. The inconsistency of the protection, as shown in Figure 60, breaks the continuity of enclosure and subjects pedestrians to sometimes widely varying conditions.



61 Minimal protection.

The building edges in the retail district have, generally, a high degree of penetrability. This has to do with the large number of small retail outlets. The highly penetrable edges support shopping activity. In contrast, the Jordan Marsh department store in Downtown Crossing, for example, has a low degree of penetrability which not only affects the ambience of the street but also the pedestrian circulation pattern. The heaviest pedestrian traffic on Washington Street appears to be along the west edge, and edge penetrability on this side seems to be a major contributing factor.



62 A high degree of weather protection.

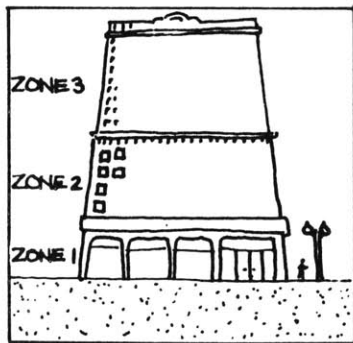
The architectural response to the vertical component of the building edge should recognize its differences. One might analyze the vertical component of the building edge in terms of three zones, (Figure 65). The first zone is the street level story of the building (in some cases two stories); it is this zone to which the public



63 Complete enclosure.



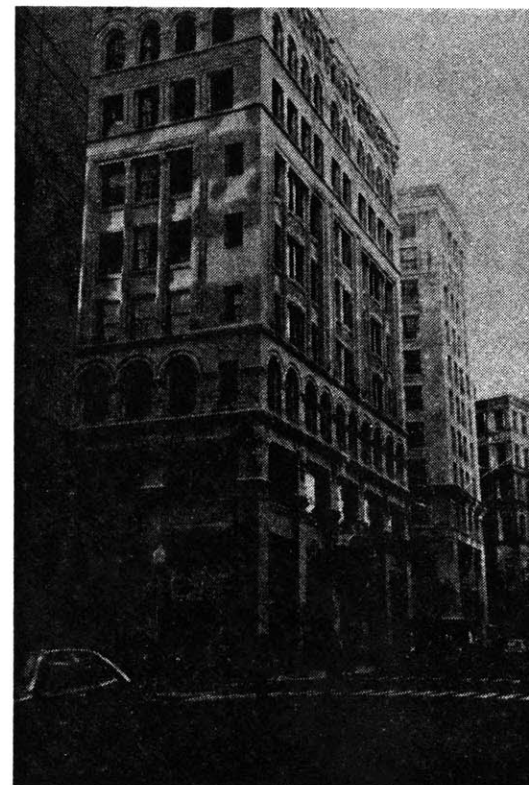
64



65 Vertical zones of a building.

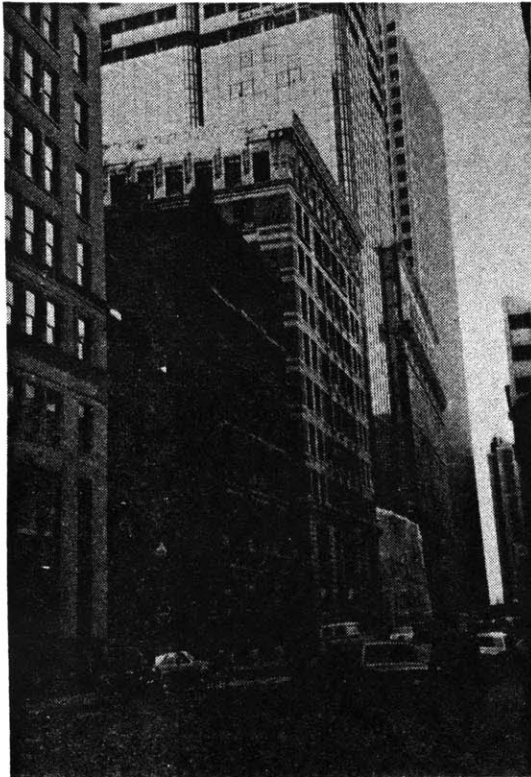
primarily relates, both visually and functionally. The second is a zone from the bottom of the second story to somewhere around the top of the fifth story; it is up to this level, depending on street width, that is within our primary visual field. The third zone is, in most cases in streets, above the fifth level, and is an area we tend to have little visual contact with in streets, although we recognize its presence principally in terms of massing and shadow. We see this zone primarily from a distance.

These differences tend to be articulated in the 18th and 19th century buildings in the downtown, as illustrated in Figures 66 to 68. The first story is typically the public story, and this is expressed by the height of the story, the attention to entrances,

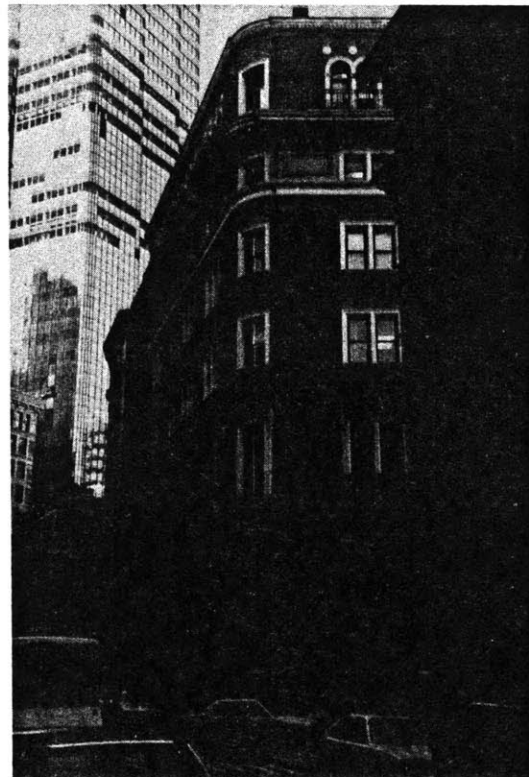


66 Articulation of vertical zones.

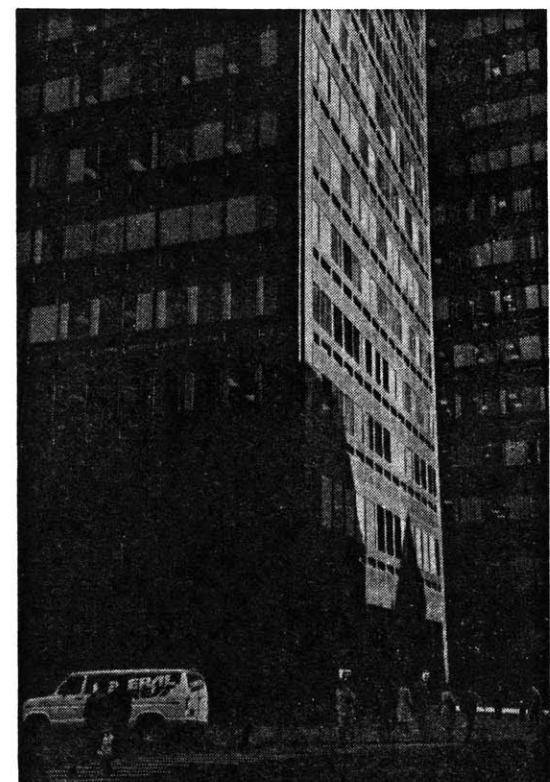
and a concentration on detail and materials to give it visual presence. Differences in levels above this are often articulated with horizontal banding and changes in the fenestration. Most modern buildings in the downtown are less responsive to these differences.



67 Articulation of vertical zones.



68 Articulation of vertical zones.



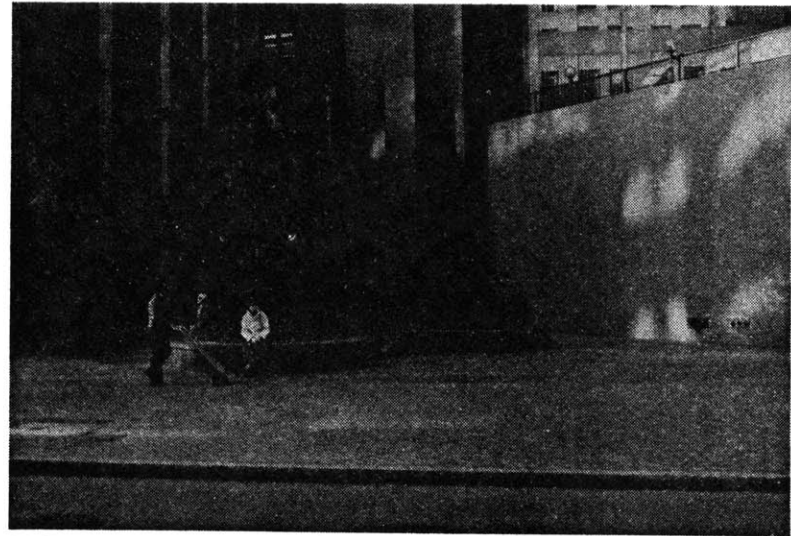
69 Vertical zones are not articulated in most modern buildings.

In areas of high public activity, for example retail districts, the ground story building edge is particularly important. To those qualities previously mentioned that support public activity, (namely building use, transparency, penetrability,

edge form, variegation, weather protection and transitional zone), we can add building articulation and detail, which can provide an increased sense of building function, visual interest and a sense of intimacy.

Plazas, or squares, in the downtown are nodal points where public activity tends to be concentrated. Their building edges, particularly at street level, are therefore of particular significance in reinforcing the activities of the plaza. The edges of most of the plazas and squares in the downtown, unfortunately, are not as successful as they might be. This is due in part to design, for example hard impenetrable edges or isolation of the plaza from its edges by vehicular streets. It is also due to the type of building use, for as previously mentioned certain uses, such as restaurants or bars, generate much more activity than others, for example banks. Further, certain uses tend to support, or reinforce, activities in the plaza. Certainly the provision of food is one such support; others include newsstands, bookstores and exhibition spaces.

The small plaza at the intersection of School and Washington Streets in Downtown Crossing is popular during the summer months. Its success seems to be due, at least in part, to its relatively sunny location particularly around noon, the presence of public tables and chairs, food vendors in the street,



70 A small plaza on Washington Street - the edge does not support the function.



71 Plaza at intersection of School and Washington Streets.

intimate buildings on two sides (the Globe Corner Book Store and Old South Meeting House), and little, and slow, traffic on School and Washington Streets. The Boston Five Cents Savings Bank provides a back edge to the plaza. If its ground floor was to change to a restaurant, for example, reinforcing activity in the plaza, the plaza would be even more popular.

SENSORY QUALITIES

Sensory qualities refer to our perceptions of particular environments or places - what we see, hear, smell and feel. The intent of this section is to document some general impressions of those qualities for the Downtown Crossing area from personal observations.

A more complete study of the sensory qualities should consider the range of individual differences in perception, with special attention to those who are handicapped in their sensory abilities. An individual's perception of the physical features of an environment or place has to do with both the sensory qualities of the environment and the physiological and psychological traits of the individual. To further complicate the issue, as environmental psychologists and sociologists have pointed out, humans cope with adverse stimuli in cities (for example unpleasant noise, visual clutter and obnoxious odors) by screening it out - a process termed habituation or adaptation. The unfortunate aspect of habituation is that people become

desensitized to the sensory qualities of the city. A study of the sensory qualities can become, therefore, a very complex task.

Boston's downtown is rich in visual images. As Donlyn Lyndon puts it so well, (in "The City Observed: Boston"):

"...there is much to discover. Past jostles with present in a particularly boisterous manner. Simple brick boxes that were several generations old when they heard the intemperate voices of revolution stand inconveniently and majestically among elaborate steel-and-concrete structures heralding another form of dominion. Tough granite buildings of uncompromising rationality are interspersed with terra-cotta fantasies and with the splendors of the Renaissance that have been urbanely refashioned for Yankee enlightenment. In the center of Boston, buildings seldom align, so the structure of various periods are more distinct here than they would be in a city constructed on a grid.

...At street level, where smaller buildings often make subtle shifts in alignment to accommodate the angles, the vistas ahead are constantly changing; major buildings are thrust into view, and the intersections occasionally border on the bizarre.

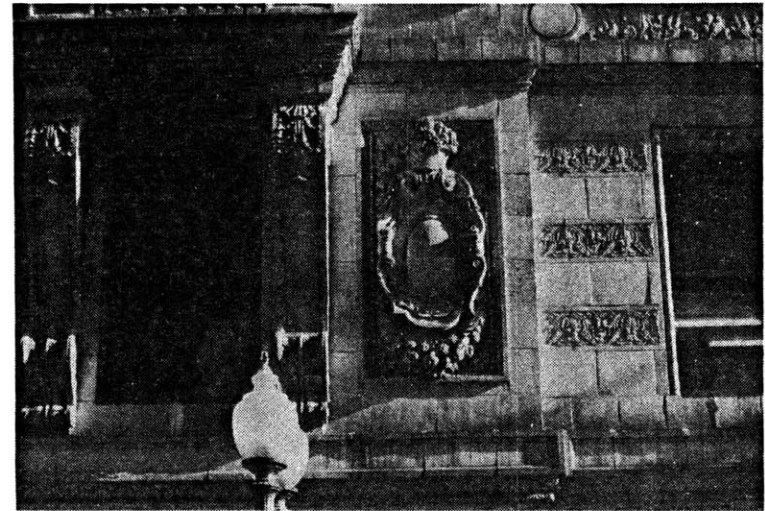
...The street walls of Boston are more shapely and eventful than our conceptions, more fuddling to the systematizer. They have a rich, sculpted and episodic order, made mostly by buildings that are more staid than the ensembles of which they are a part." (p. xvii)

Downtown Crossing, on which this analysis is primarily focused, is an area which has seen little development in over a century, although a few "modern" structures have incongruously imposed themselves in the older fabric. The intimate scale, variegation and ornamental facades of the 19th century buildings are salient visual features, often seen from the context of short narrow streets - themselves which have a sense of intimacy.

The ornamental elements, or details, stand out in contrast with the staid form and colors of the buildings. But it is with this background that they are most noticeable. It is these details which most catch our eye, and our imaginations, and we follow the details across the building face the way we would look at a landscape or a painting. If we concentrate on a particular detail its symbolic qualities evoke mental associations - for example the fruit in the basket at Filene's, (Figure 72). The use of detail

varies widely - from very simple to florid.

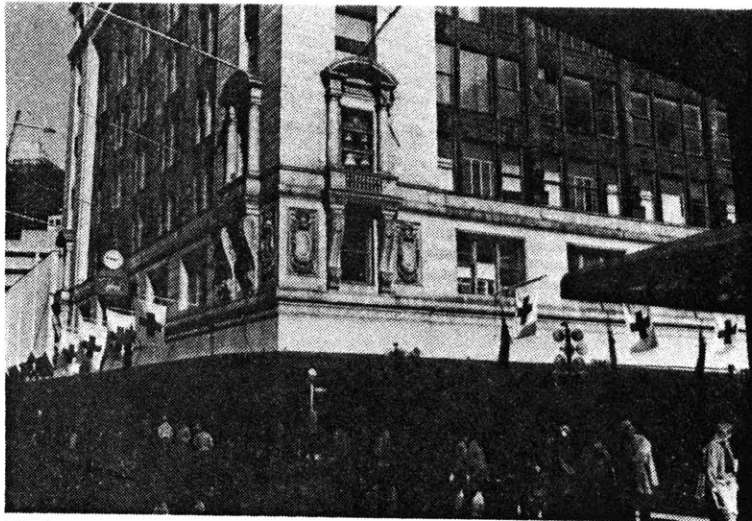
The 19th century buildings often have a great deal of texture - both visual and tactile. This quality is a result of the characteristics of the building materials, (for example cut-stone or brick), the variety of building materials used in a facade, (stone, brick, terra-cotta, cast iron, glass), the building articulation, the fenestration patterns and differentiation with level, and building details, (window sills, lintels, cornices, and so on). Most of the 19th century buildings in Downtown Crossing have a very intricate textural pattern.



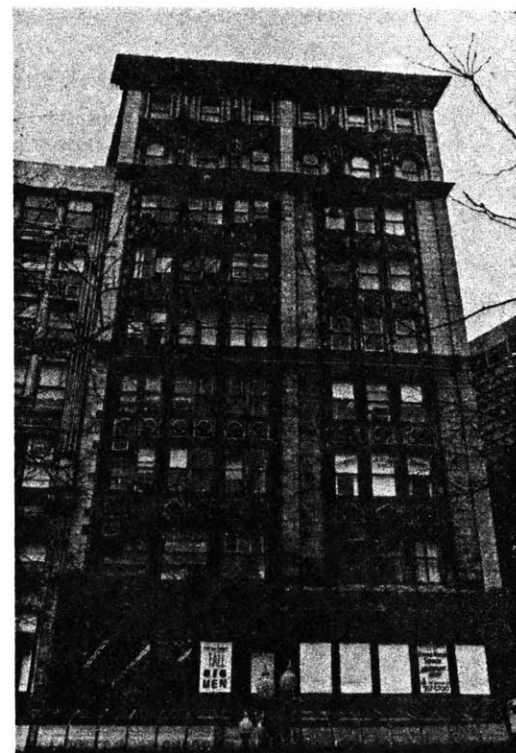
72 Ornamental detail at Filene's.



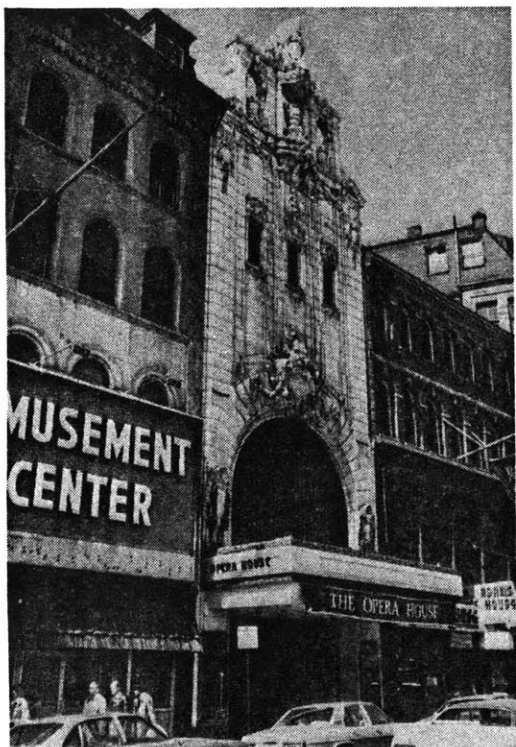
73 Facade detail - Washington Street.



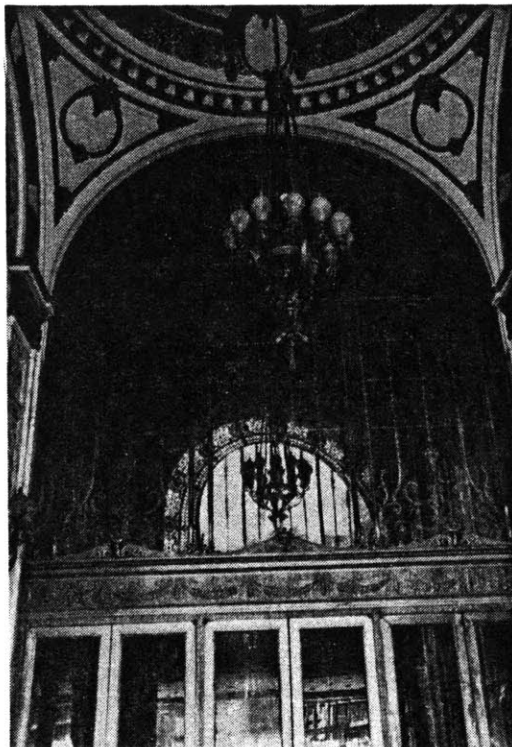
74 Facade detail - Washington Street.



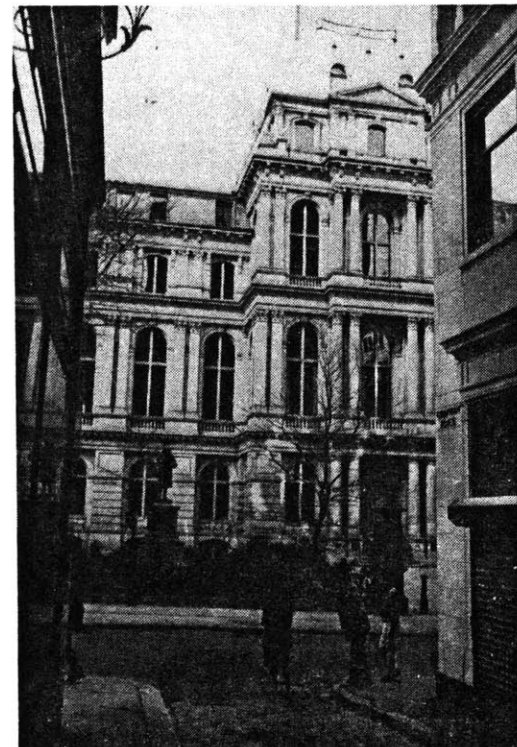
75 Filene's.



76 The Opera House - Washington Street.



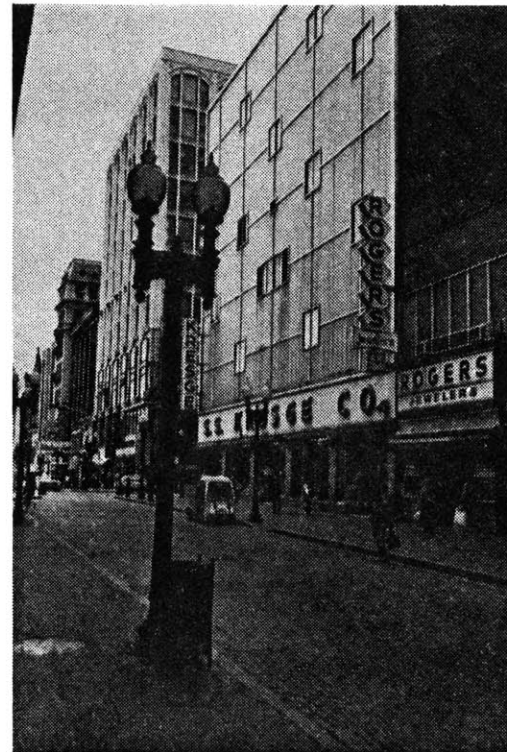
77 Entrance to Opera House.



78 Old City Hall.

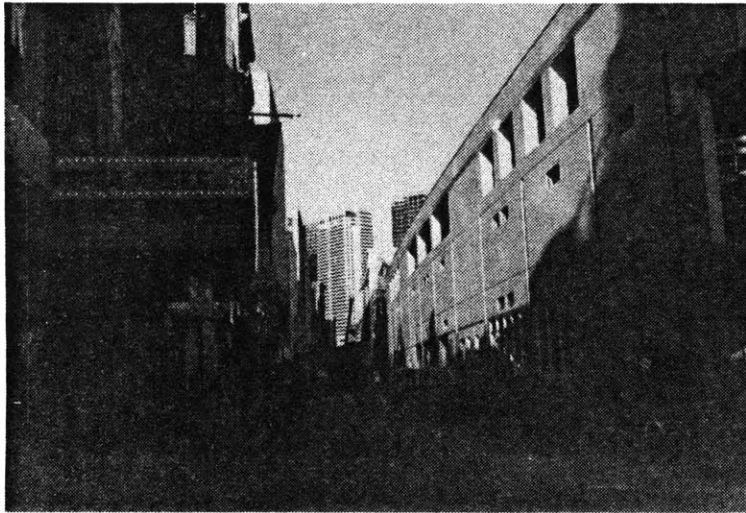
In contrast, most of the "modern" buildings, since about 1950, in the area have very little sense of texture, either visual or tactile. Their effect on Washington Street, as illustrated in Figure 79 with the Kresge building, is that they break the textural continuity of the older buildings on the street and are visually incongruous. The details along the public edge of Lafayette Place, (Figure 80), are an improvement from the featureless wall of the adjacent Jordan Marsh building but tend yet to be a minimally responsive approach to Washington Street. Lafayette Place is, however, sensitive to the curve of Washington Street, does follow the street edge, uses appropriate materials and has a height appropriate to the street.

Texture and materials are also important elements in the street surface. On Washington Street, for example, the red brick surface of the street has a very strong presence, partly because of its strong color and the fine texture of its joints and partly because of the contrasting, more sullen colors (greys, browns and bleges) of most of the buildings along it.

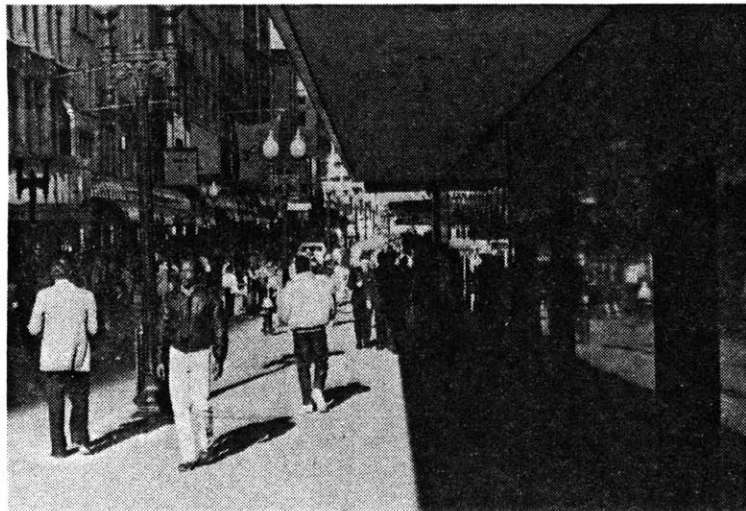


79 Kresge building breaks the continuity of richly sculpted facades on Washington Street.

Changes in textural patterns in street surfaces can denote functional zones in a street, for example at the Faneuil Hall Marketplace, where brick is used primarily for pedestrian walks and rough granite pavers are used, in association with other elements (trees and light standards), for passive areas.



80 Lafayette Place, on right, follows the street edge.

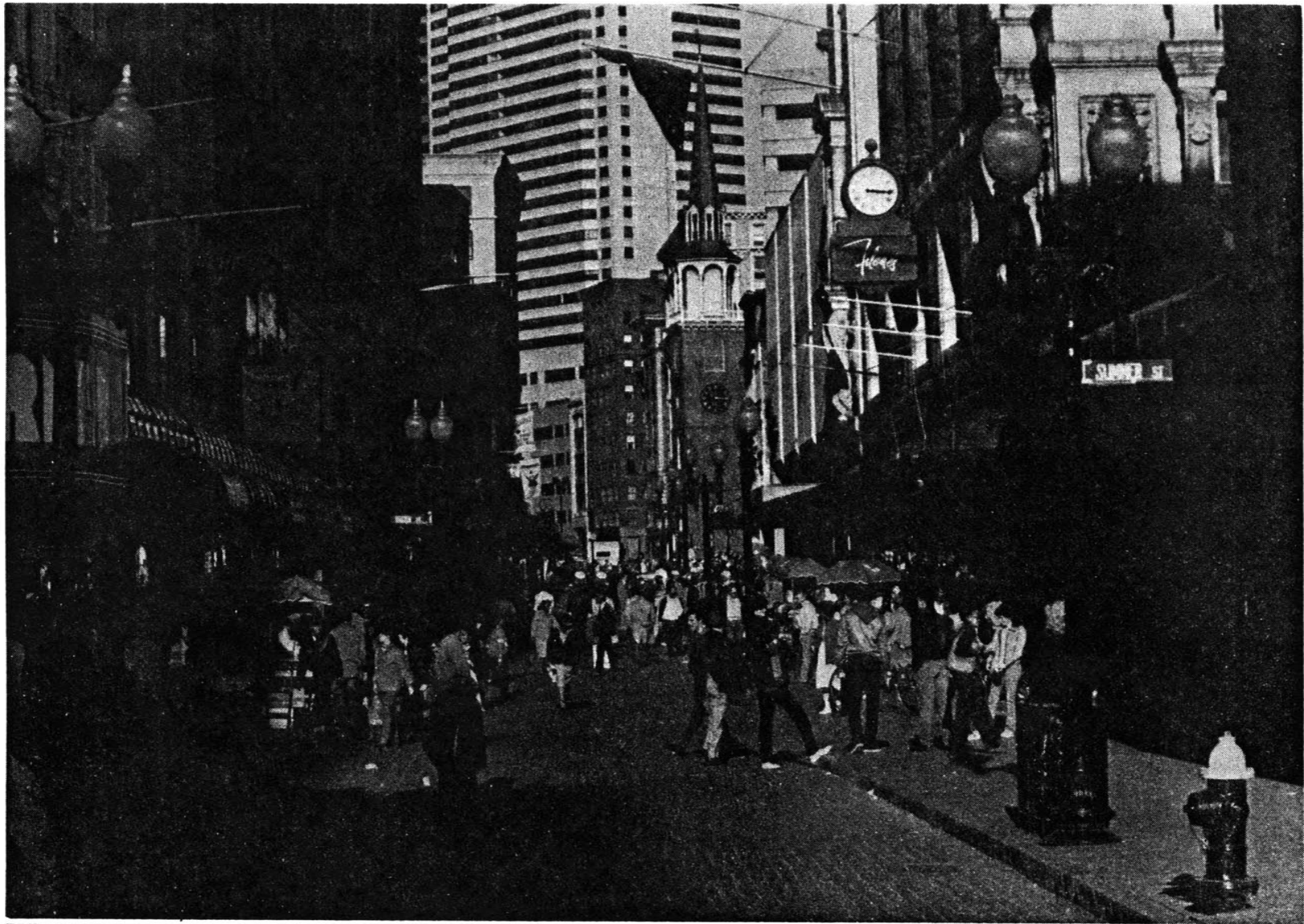


81 Prosaic edge of Jordan Marsh building.

Detailed patterns in the street surface add to the character of the street, and at nodal points, can reinforce the sense of place.

In looking down a street we see layers of visual information, as Figure 82 illustrates for a portion of Washington Street. The more dominant visual elements are the street surface, the form of the buildings, a dense, and moving, group of people, and the sunlight and shadow patterns. The next layer would include the streetlights and canopies, followed by building fenestration and articulation. Our view might then be focused on smaller elements including signage, street clocks, and so on; and finally we may look at the intimate details. We generally sift through these layers quickly, and without conscious effort, to select out any features or information we may be looking for.

The visual field on which we primarily focus, in walking along a street, extends vertically to about the top of the first story of the buildings along the street. We tend to focus on this field to be able to negotiate around and among people, objects and



surface irregularities. We also tend to look for information at this level.



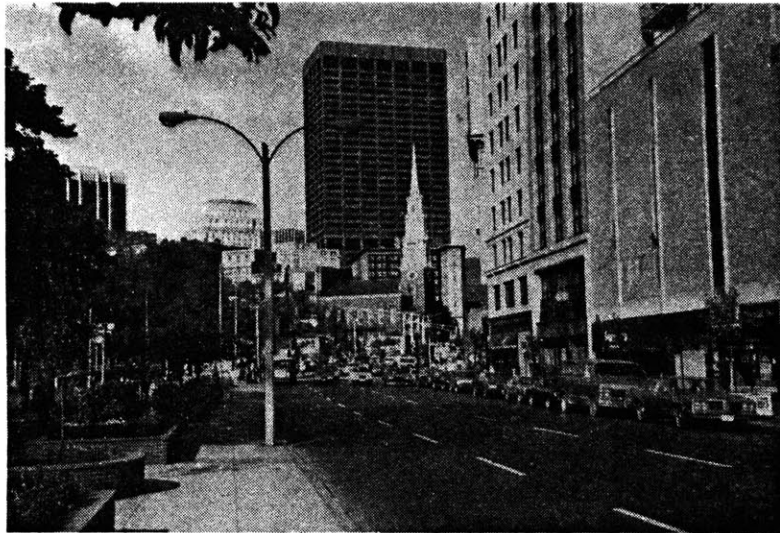
▲ **83** Clock at Filene's.

◀ **82** Layers of visual information - Washington Street.

Visual dominance of street level. **84** ▶

One can visualize this field in analyzing Figure 84. Elements in this field which give the street a strong visual continuity are the canopy along the right building edge, and its vertical supports, the streetlights, and the texture of the brick pavers in the street surface. A number of problems are also apparent. One problem has to do with the granite curbs in the street, in that a vehicle path is visually too dominant in the street; in fact it creates a separate zone in the street which breaks the edge to edge continuity. Another break in continuity results from the change in surface materials from brick to concrete. Other visual





85 Visual landmark - Park Street Church.

problems are the poor placement of street hardware (mail box and transformer box), and the poor treatment of signage along the street.

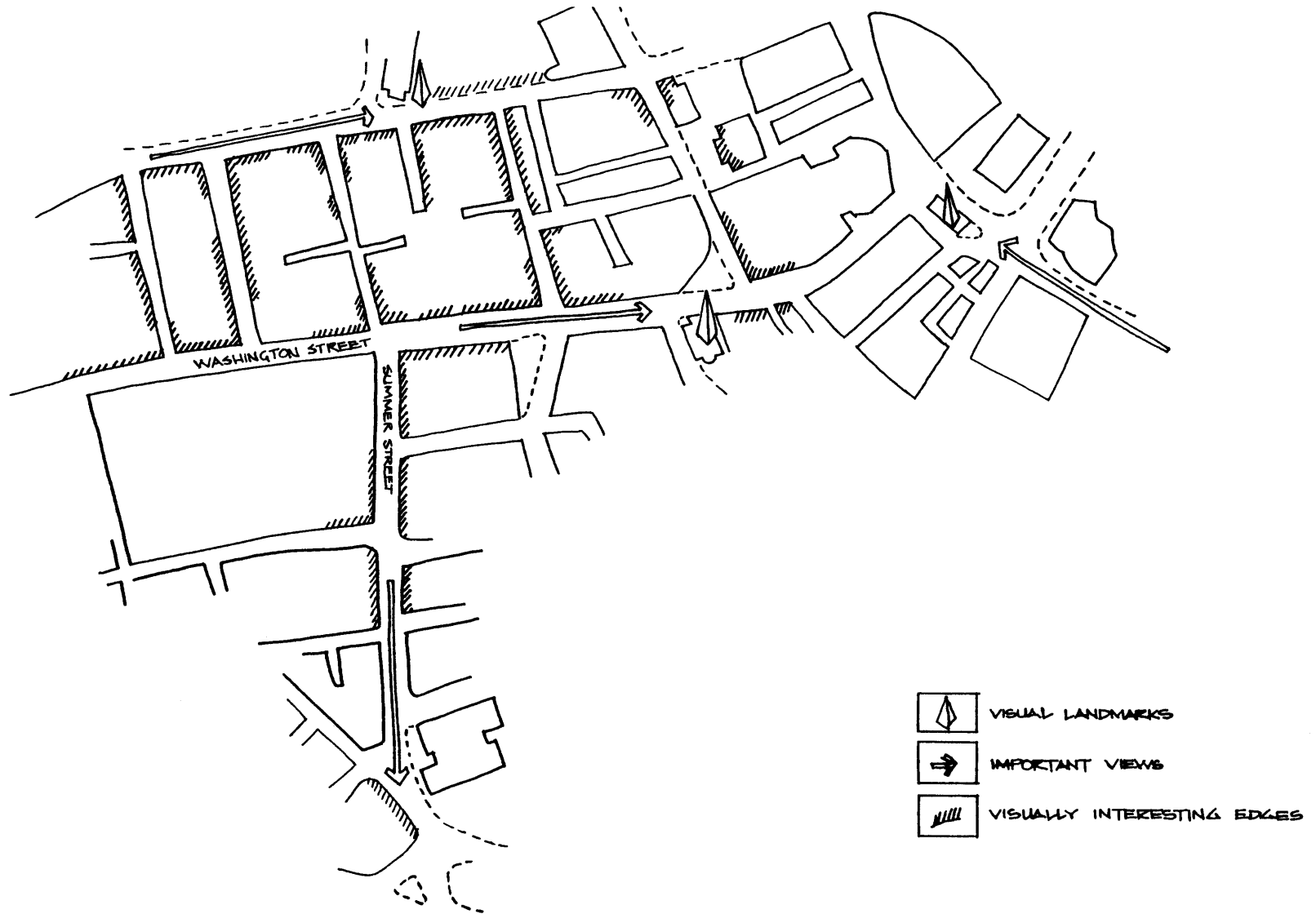
Important visual landmarks in Downtown Crossing include the Park Street Church, the Old South Meeting Hall, and on the northern periphery, the Old State House. All of these can be distinctly seen, in a distance, along their respective streets, as illustrated in Figure 82. Unfortunately they have, over the years, lost some of their visual presence against backdrops of high-rise buildings. The spire



86

Visual landmark -
Old State House.

of the tower of the Old South Meeting Hall, for example, no longer meets with sky but rather loses much of its visual significance against the horizontal fenestration of the massive Devonshire Tower in the background. The preservation of their views is an important consideration, but further, design consideration should also be given to buildings which act as backdrops to them.



87 Major visual features of Downtown Crossing.

Buildings along bends in streets also deserve special attention because of both their high visibility and their ability to reinforce the sense of direction change in a street. The row of 19th century buildings along the outward edge of the bend in Summer Street, near Dewey Square, is an excellent example, (Figure 88). As Figure 88 illustrates, both the curving of the buildings along the street edge and the character of the buildings strongly reinforce Summer Street. The contrasting background of mammoth office towers in Dewey Square further emphasizes the intimate quality of this street.



88 Nineteenth century buildings reinforce bend in Summer Street.

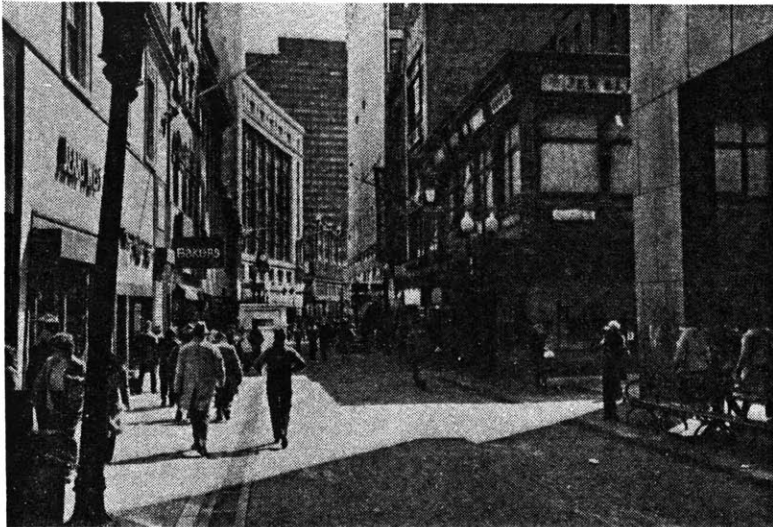
The public edges of the 18th and 19th century buildings in Boston's downtown generally coincide with street edges, even to the point of some very odd buildings. This quality and the contiguous typology of the buildings have resulted in highly defined streets in the downtown. It is only the modern office towers, with setbacks from the streets and small plazas, that have broken this tradition.

Sunlight and shadow patterns are also prominent visual features of Downtown Crossing. The continual contrasts emphasize this quality, for example in walking from Tremont Street, opposite the Boston Common and very open to the sky, into Winter Street, which is dark and canyon-like, and then into Summer Street which opens up to the sky again. This quality is certainly fitting to their names.

The cross, or "ladder," streets, (School, Bromfield, Winter, Temple and West Streets), are all dark, compared to Washington and Tremont Streets. This quality of light and their narrow widths, tall heights, and partially closed east-ends give them somewhat of a canyon-like image - analogous to a

series of mountain passes.

Another factor which gives sunlight and shadow patterns such prominence is their irregularity on the street surfaces and building edges. This is due in part to the uneven height of the buildings and the presence of alleys opening into the streets, resulting in patches of sunlight among areas of shadow. It is, perhaps even more, due to the textural qualities of the buildings, previously mentioned. The sunlight and shadow patterns on the sculpted surface of the buildings produces strong visual images.

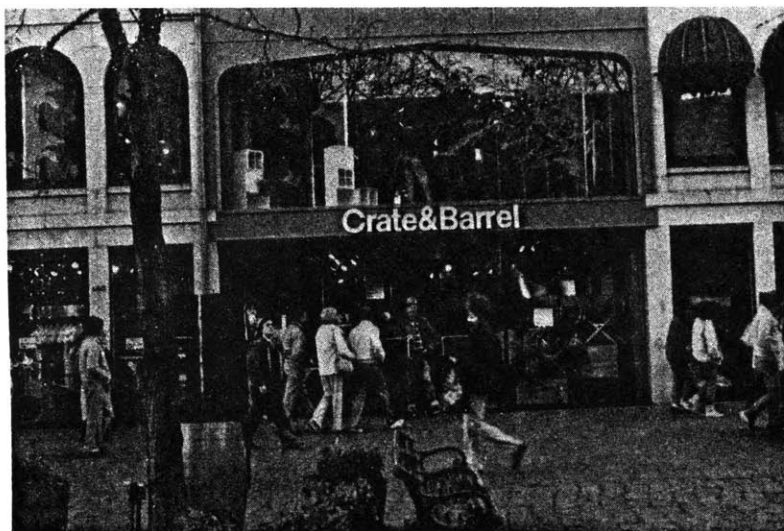


89 Patches of sunlight on Winter Street.

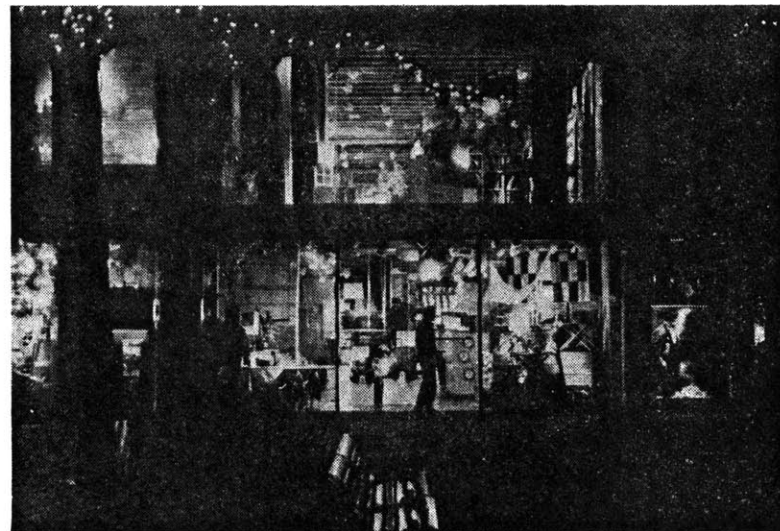
The qualities of light are always changing in daily and seasonal patterns. As day changes to night, and daylight is replaced with artificial light, new images emerge. Suddenly some of the store windows become aglow with visual delights. The Faneuil Hall Marketplace has capitalized on this with their night lighting.

The night lighting of Downtown Crossing is prosaic in comparison. The ornamental streetlights give the street a strong visual continuity, but unfortunately the stores are closed at night and their lighting is generally unimaginative.

Visual landmarks, for example the Old South Meeting Hall, the Old State House and Faneuil Hall, are poorly lit at night, a time when their orienting quality is most needed. A sensitive approach to the night lighting of the landmarks has been proposed in the report, "City Signs and Lights" by Ashley, Myer and Smith, which suggests lighting from the inside of the landmarks. This would give much more sense of the character of the building than does the present method of washing the outside walls with light.



90 Faneuil Hall Marketplace - daytime.



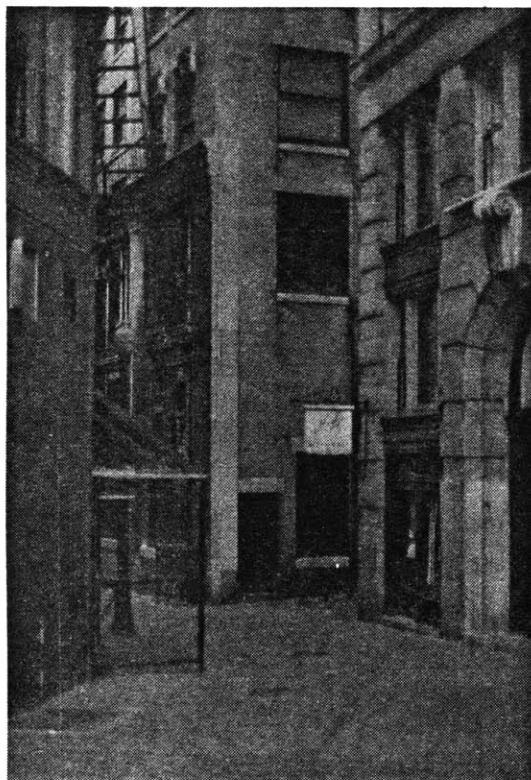
91 Faneuil Hall Marketplace - nighttime.



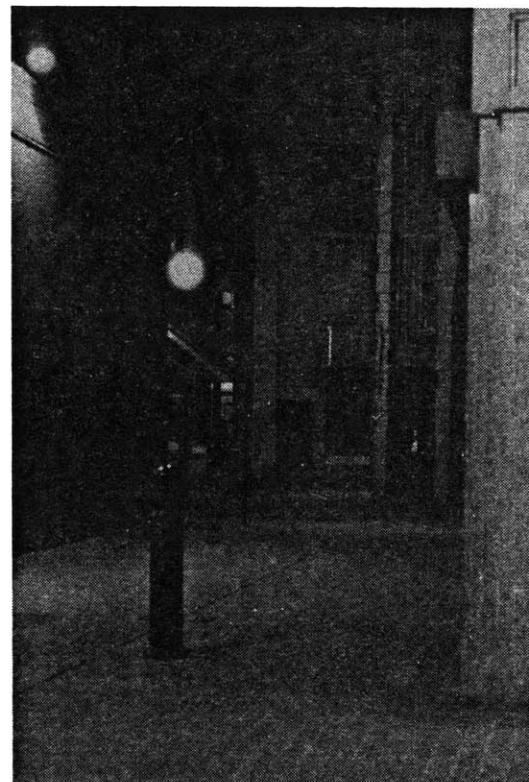
92 The inside can become a display gallery.



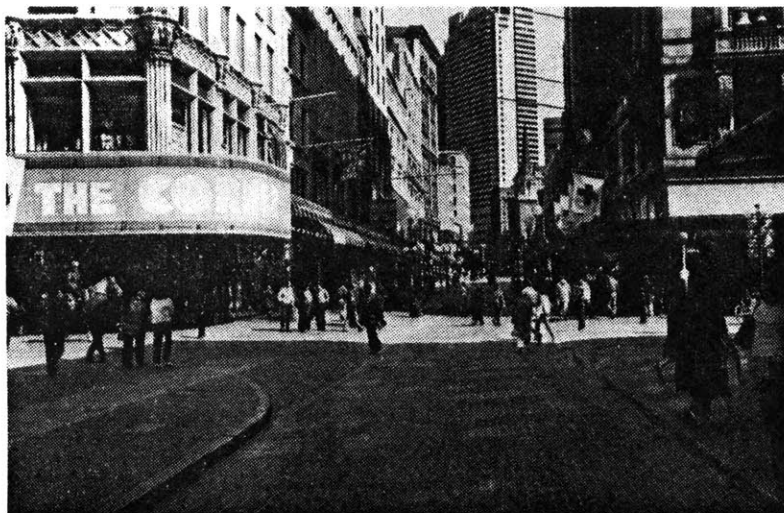
93 Wintertime night-lighting at Faneuil Hall Marketplace.



94 Spring Lane - daytime.



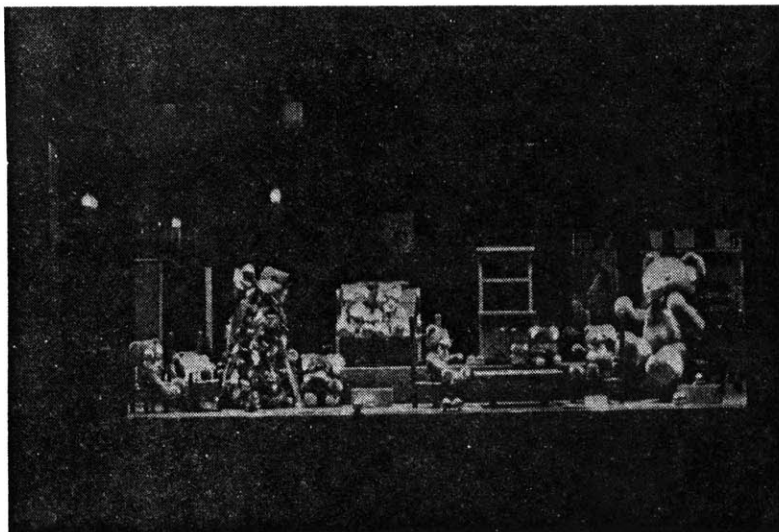
95 Spring Lane - nighttime.



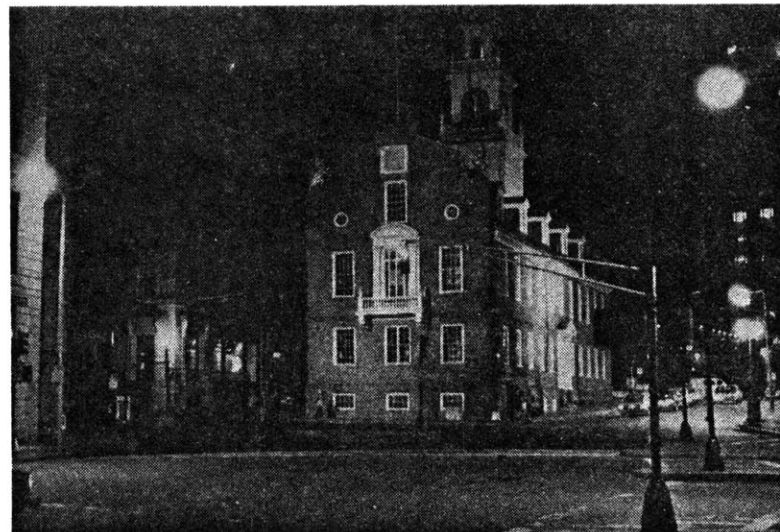
96 Washington Street - daytime.



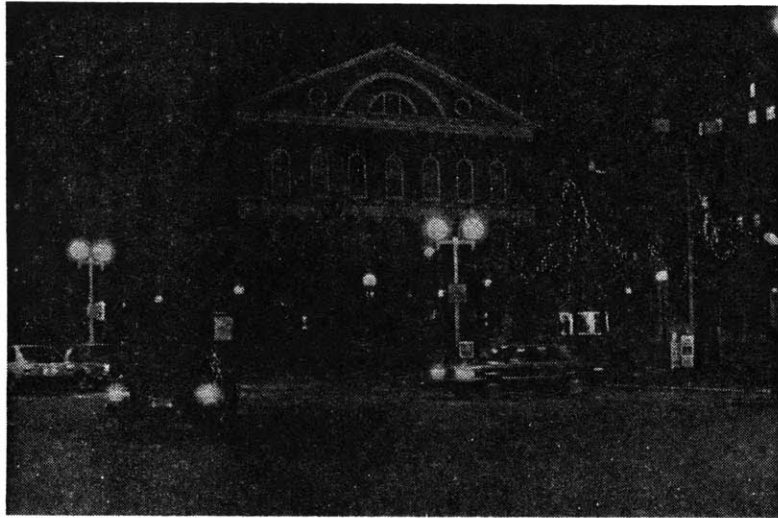
97 Washington Street - evening.



98 Small display window at night.



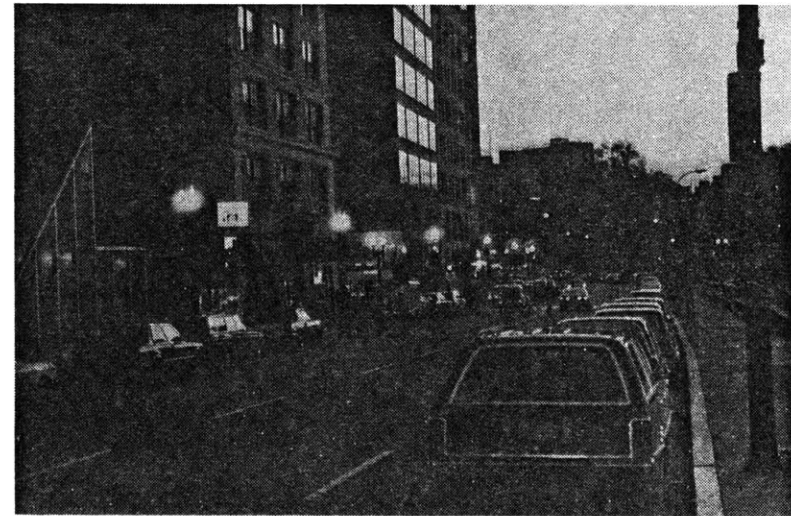
99 Present night-lighting - Old State House.



100 Present night-lighting - Faneuil Hall.

Another problem with the use of night light in the downtown is the incoherent use of streetlights. Tremont Street for example has three different types of streetlights in the distance of a few blocks which creates an inconsistent image. A system of streetlights should be designed for the downtown which reflects the particular characteristics of the streets on which they are situated, and is sensitive to the needs of both drivers and pedestrians.

Sounds in Downtown Crossing are not as prominent in one's image of the area as are the visual qualities,

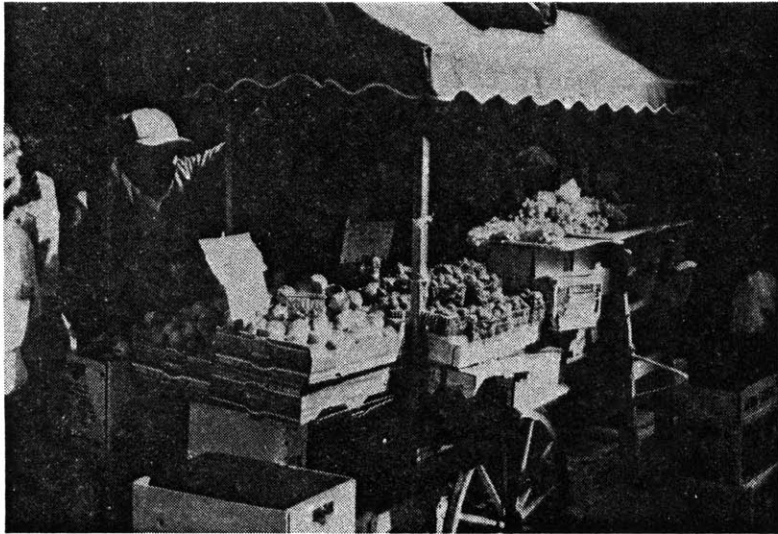


101 Consistent and imaginative use of streetlights would enhance imageability of Tremont Street.

but there are notable characteristics. The sounds of street vendors leaves a strong impression - "...buy your Globe here...Globe here" or "...hot pretzels ...hot dogs." During the Christmas season we can see and hear a variety of animated toys. Street musicians are ever present - for as long as they have the crowds. They vary from individuals playing guitar, flute, electronic synthesizer, or whatever, to steel bands playing music of the Caribbean. Their close proximity creates an interesting mix of sounds, often bordering on competition for dominance.

On pedestrian streets traffic noise is generally heard only in the distance and tends to be unnoticeable - a pleasant relief in the downtown. Minor irritating noises do occur, for example high pitched humming noises of transformer boxes, awkwardly located along the streets. Flourescent lights can also be unpleasant, particularly with malfunctioning ballasts.

Pleasant smells in the area are primarily attributable to the many street vendors, selling hot pretzels, peanuts, hot dogs, fruit and flowers. From adjacent buildings along Winter and Washington Streets we occasionally pass the sweet smell of one of the pastry shops.



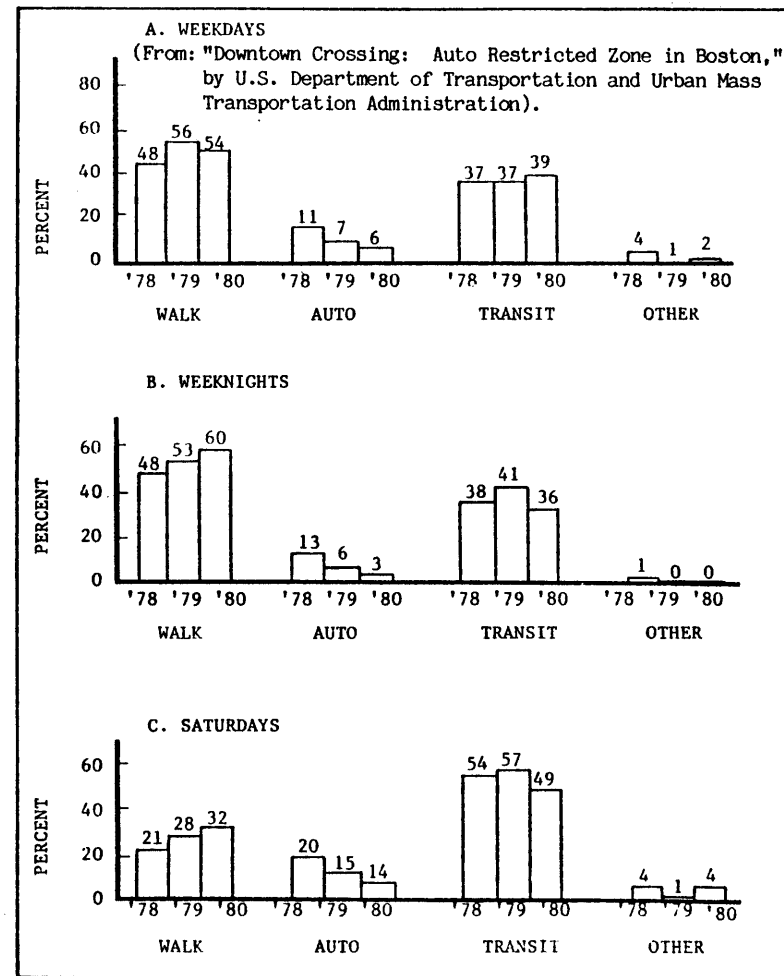
102 Street vendors enhance sensory qualities of Washington Street.

ACCESS AND CIRCULATION

A number of characteristics are generally recognized as integral to effective urban circulation systems. These include: accessibility between the different parts of the city; capacity to meet demands without congestion; integration between the various modes of movement; sense of orientation; safety; pleasant experiential quality; and the minimization of adverse impacts, such as air pollution, noise and barriers.

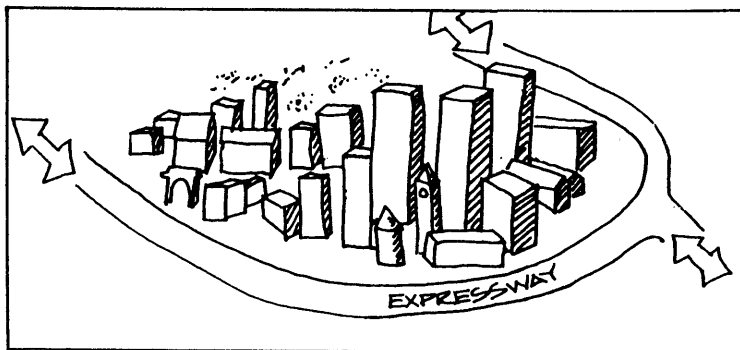
There are three principal modes of access to, and circulation within, downtown Boston, namely private vehicles, public transit and walking. The relative numbers of people using each mode to access the Downtown Crossing area are shown in Figure 103. The use of automobile to access Downtown Crossing, as Figure 103 illustrates, has been declining.

The number of vehicles accessing the periphery of the downtown, however, and in particular the Financial District, seems likely to have increased with the rising number of office towers. The periphery of the downtown is easily accessed by vehicle, from the



103 Mode of access to the Downtown Crossing area.

surrounding metropolitan area, on arterial streets and expressways.



104 Expressway access to perimeter of downtown.

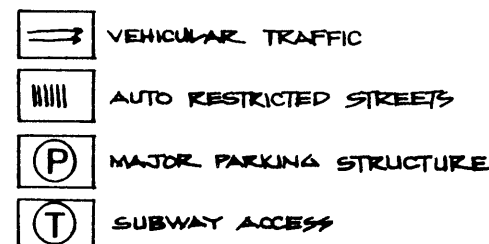
The major parking garages tend to be in close proximity to the arterial streets and expressways. Although street parking is typically a problem for incoming drivers, as evidenced by the high level of illegal parking, the parking garages, in general, have excess capacity even in peak parking hours. Major additional parking facilities are under construction at Lafayette Place (1,050 spaces), and are planned for South Station (approximately 2,000 spaces). Another fortunate phenomenon in the downtown is that the pattern of office towers in the Financial District generally follows the Fitzgerald Expressway, which avoids loading internal streets.

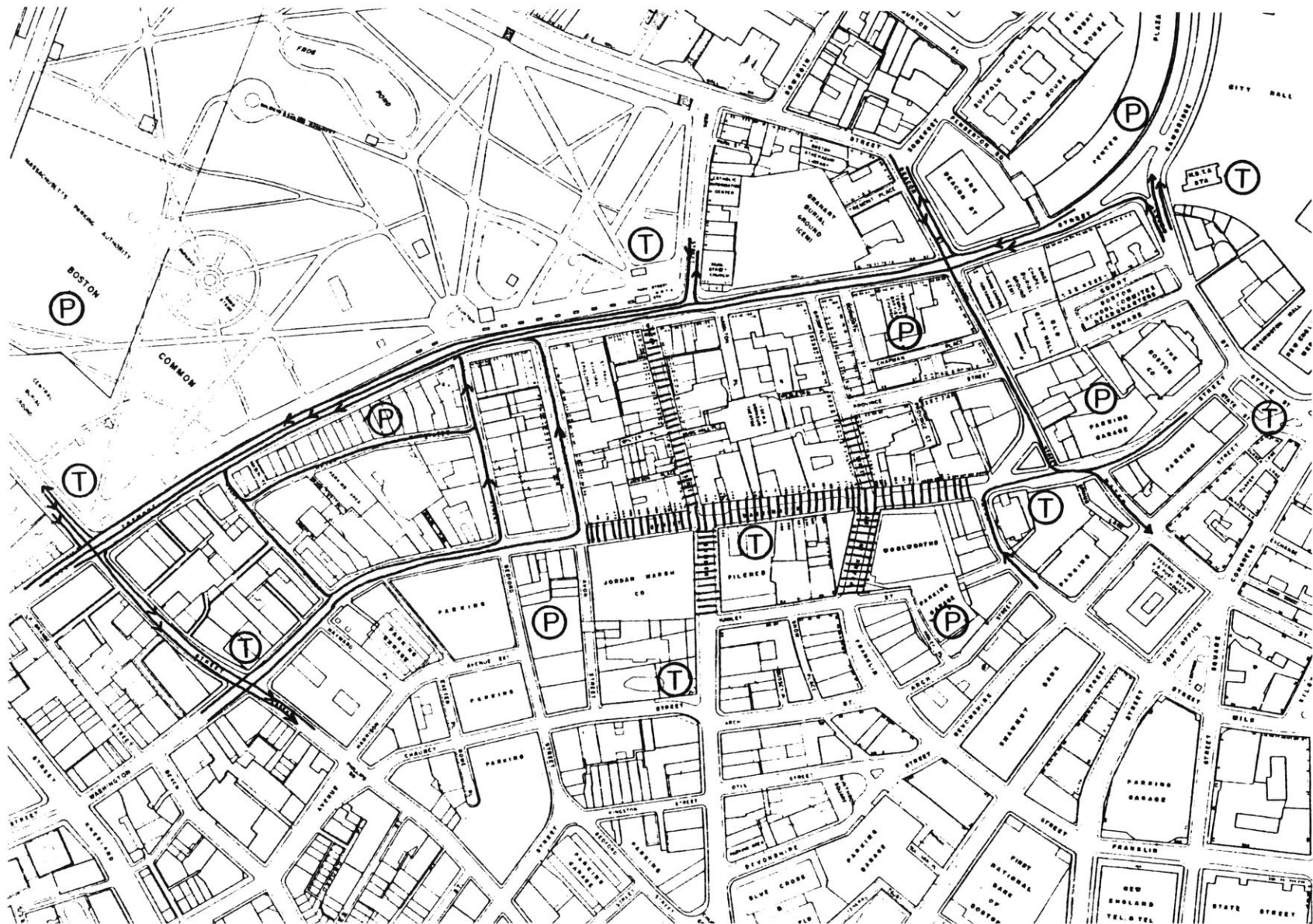
The organic street network of the downtown is not conducive to vehicular circulation because of its

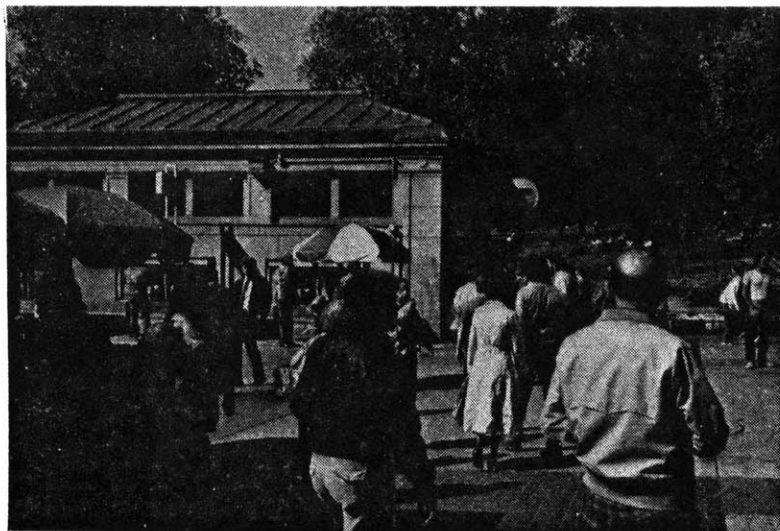
irregular and confusing street pattern, which appears to be a major factor in the low volumes of internal traffic. This is a major factor in its high suitability to pedestrian movement, as previously discussed.

A high level of accessibility is also maintained through public transit, including subway, bus and railway. The downtown is the focal point of the metropolitan rapid transit system with two railway terminals, North and South Stations, and the intersection of three subway lines at Downtown Crossing. Public transit also appears to meet general needs for internal circulation in the downtown, although distances tend to be short and walking is often just as fast and usually more

Access and circulation in Downtown Crossing. 105 ►







106 Park Street subway station - a major transit stop for the Downtown Crossing area.

pleasant. Double-decker buses and horse drawn carriages add some nostalgic flavor, primarily catering to the many tourists visiting the historic downtown.

The experiential quality associated with riding the subway appears to be an issue that is overlooked by the M.B.T.A. management. There are a few positive characteristics, for example the historical sensitivity in the design of the Park Street Station, and the street musicians in some of the subway stations who relieve some of the boredom of waiting



107 Nostalgic flavor.

for the next train. However, problems are numerous - noisy trains, many dilapidated entrances and poor maintenance. Physical and management improvements would enhance the quality of experience, and concomitantly, the image of the system.

Downtown Boston is very much a pedestrian environment. Walking distances are generally short and often rich in sensory qualities - in buildings, in changing views and vistas, and in sequential variation. Orientation, though, is often a problem when wandering off "known" paths.

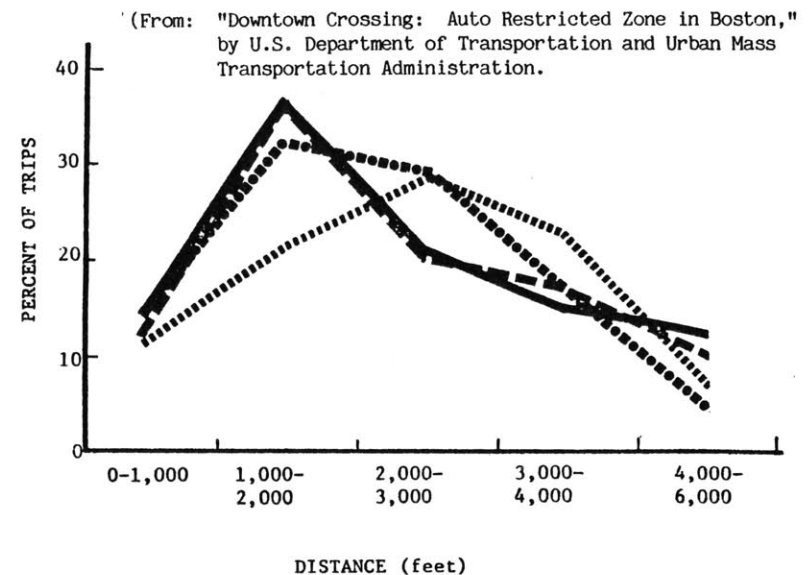
	Distance to the Corner of Washington Winter/Summer
Government Center Offices	2,200 Feet
State Street Bank Building	1,600
South Station	1,900
Harbor Towers	3,000
Chinatown	1,800
Faneuil Hall Marketplace	3,100
Back Bay	3,200

108 Walking distance to Downtown Crossing.

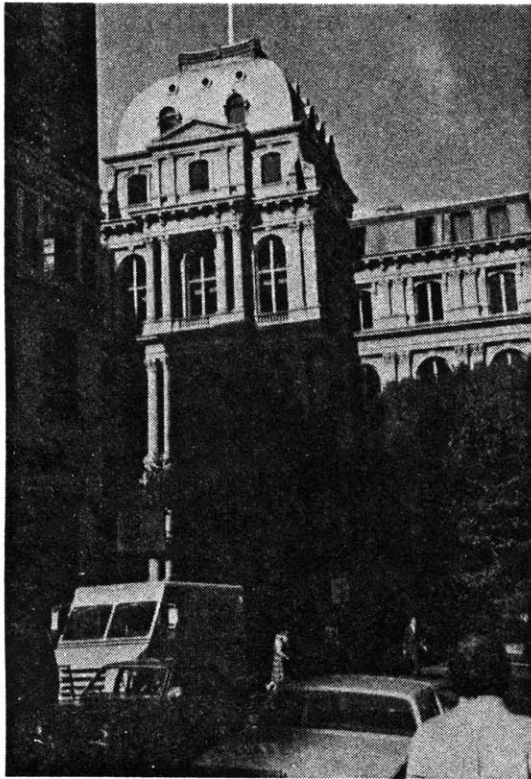
There are certain imageable paths, as indicated in Kevin Lynch's studies, in "The Image of the City," in 1959. Images are likely to have changed somewhat since then, with numerous physical changes in the downtown, although much remains the same. Tremont Street remains highly imageable because of its visual relationship to the Common. Winter and Summer Street are highly imageable because of their particular retail characteristics, and recently, the pedestrianization of the 100% Corner area. Washington Street probably has a stronger image as a path today because of the pedestrianization of a portion of it, and also because it is heavily used by pedestrians moving between Downtown Crossing and the Financial District and Government Center area.

LEGEND

- Business and personal business walk trips; no vehicle involved
- Shopping and other walk trips; no vehicle involved
- Business and personal business walk trips from parking place
- Shopping and other purpose walk trips from parking place

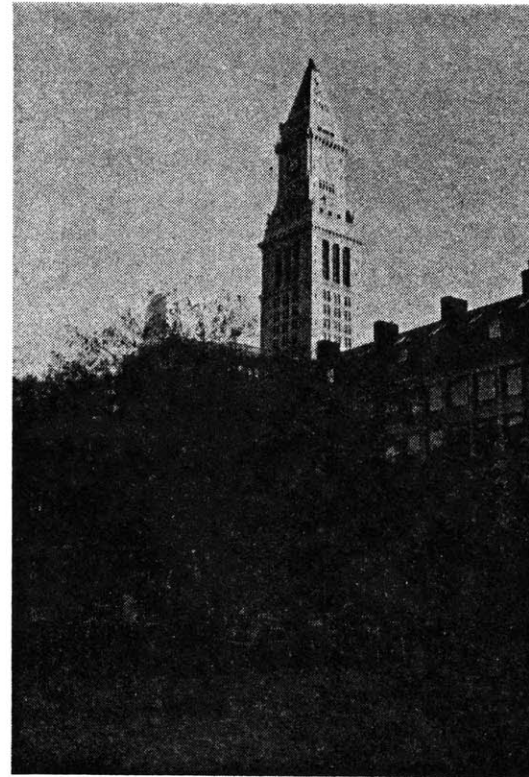


109 Walking distances for trips ending in the Downtown Crossing area.



110 Old City Hall seen from Province Street.

Visual landmarks, for example the Custom House, Park Street Church and the State House, help with respect to orientation, although the visual prominence of many of the old landmarks has been diminished with the new array of office towers. Additionally, their views tend to be limited to certain site angles and are often obscured by other buildings. Away from

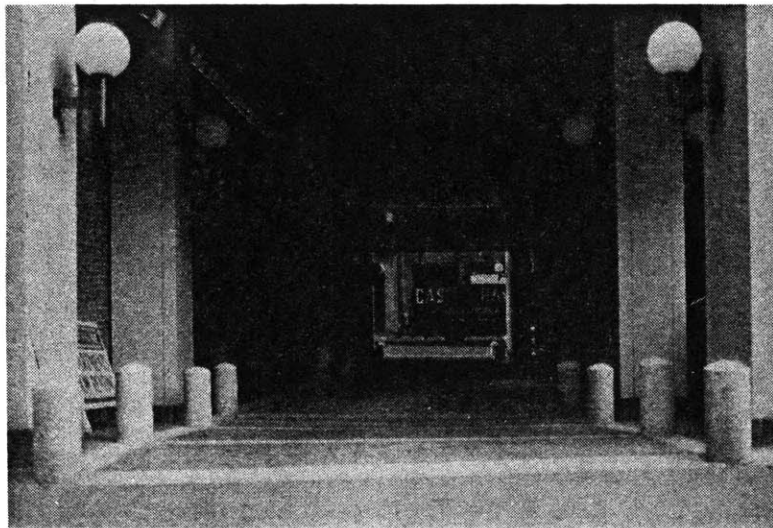


111 Visual landmark - Custom House Tower.

landmarks and main paths it is very easy to become disoriented. Occasionally, taking unknown paths can be rewarding - somewhat like charting unexplored waters; one inevitably finds new facets of the city. This characteristic, although often disconcerting to many people, is also one which makes the downtown rich in variety.

The Downtown Crossing area has a high degree of imageability. Tremont Street and Washington Street are the major north-south paths. Avery, West, Temple, Winter, Bromfield, Bosworth and School Street are short, parallel connectors between Tremont and Washington Streets. Summer Street is the principal east-west street.

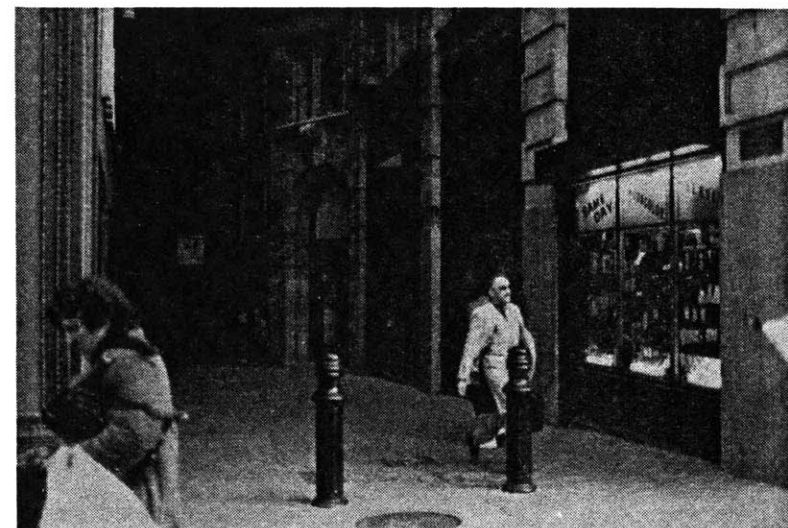
The intricate, but irregular, connections through blocks, including lanes and access through buildings, is another characteristic of the pedestrian network



112 Devonshire Tower - a connection between Washington and Devonshire Streets.

in the downtown. This is evident in Figure 54, previously shown. Examples of connections through buildings are Bailey's ice cream store, with connections between Winter, Tremont and Temple Streets, and the Corner Mall, with connections between Winter, Hamilton Place and Washington Streets. Spring Lane and Snow Alley are examples of popular pedestrian alleys.

Numerous improvements have been made, since the late 1960s, to enhance the quality of public space for



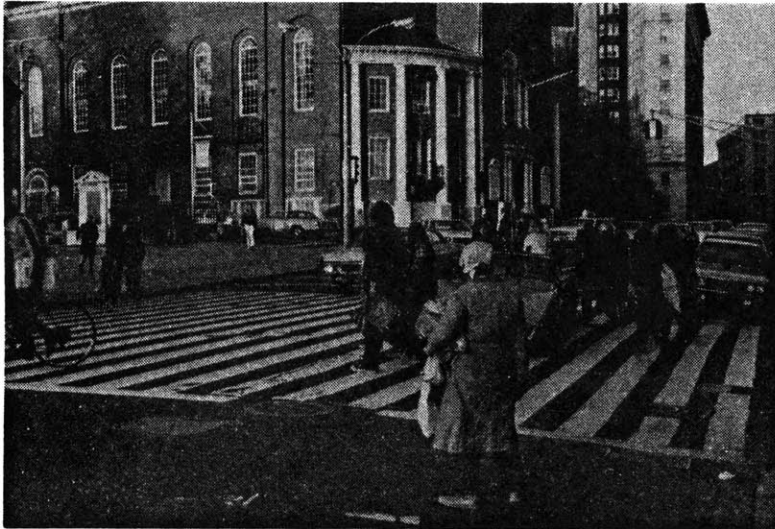
113 Spring Lane - a pedestrian alley.

pedestrians. Major efforts include the Faneuil Hall Marketplace, City Hall Plaza, Waterfront Park, the pedestrianization of a portion of Downtown Crossing, and the preservation and revitalization of historic streets, alleys and buildings.

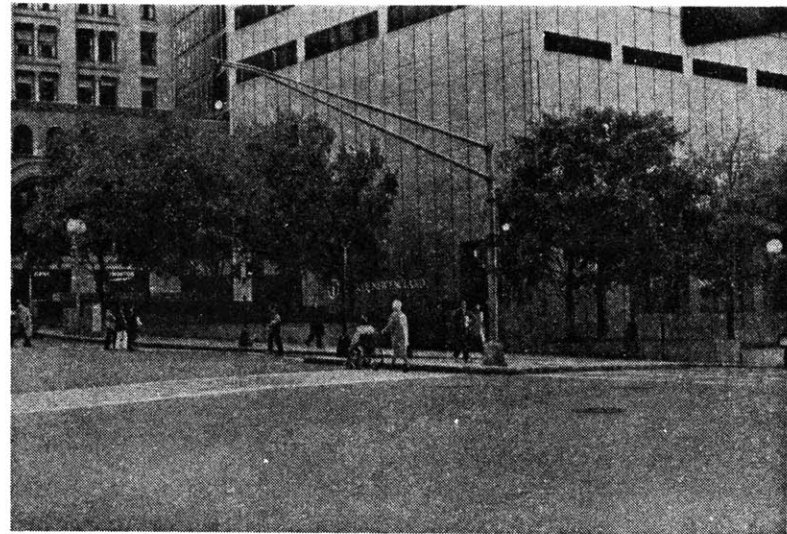
In walking through the downtown however certain flaws are evident. One major type of problem is the lack of consistency and continuity; for example within a short distance on Tremont Street there are three

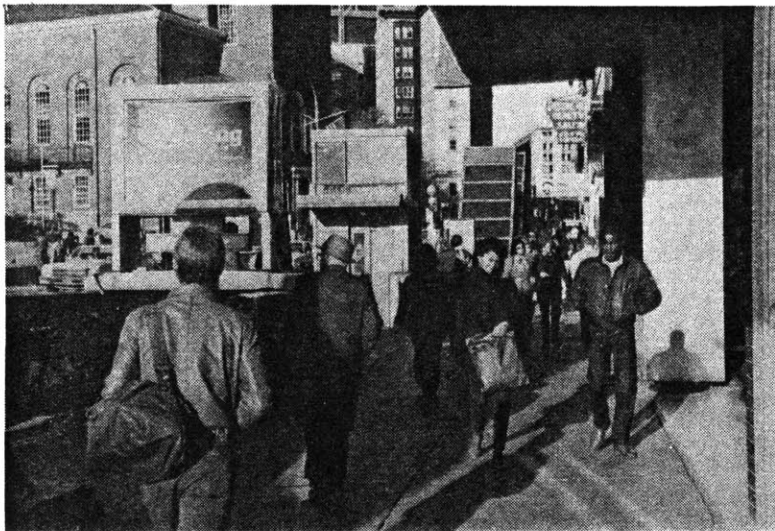
different types of light standards. Street names are another example of inconsistency, where, for example, Boylston Street becomes Essex Street and Tremont Street becomes Cambridge Street. On a detailed scale of design are, for example, inconsistencies in curb cuts at sidewalk crossings, which creates problems for handicapped pedestrians. The lack of consistency and continuity in public space detracts from its imageable qualities.

114 Pedestrian-vehicle conflicts at Park Street entrance to Downtown Crossing.

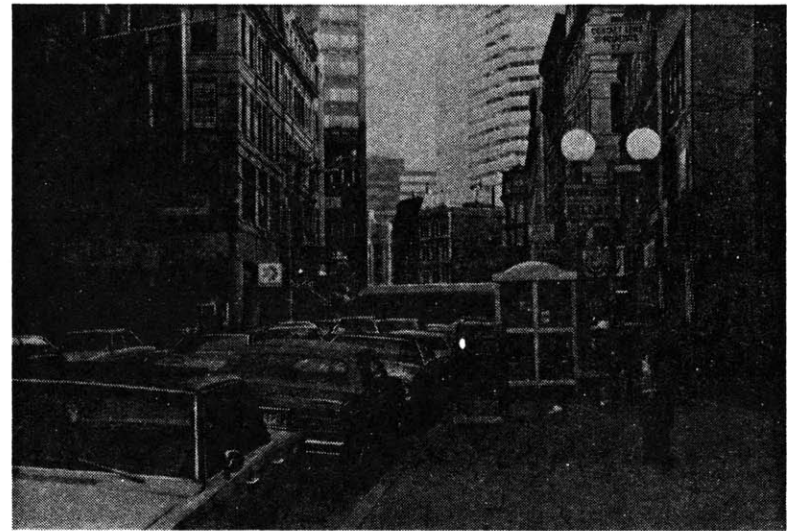


115 Lack of curb cut presents a problem to some people.

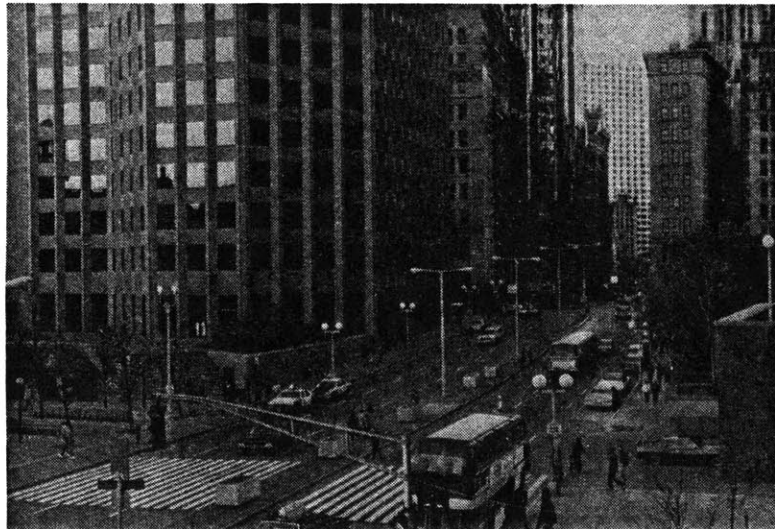




116 Subway accesses, many unused, impede pedestrian circulation on Tremont Street.



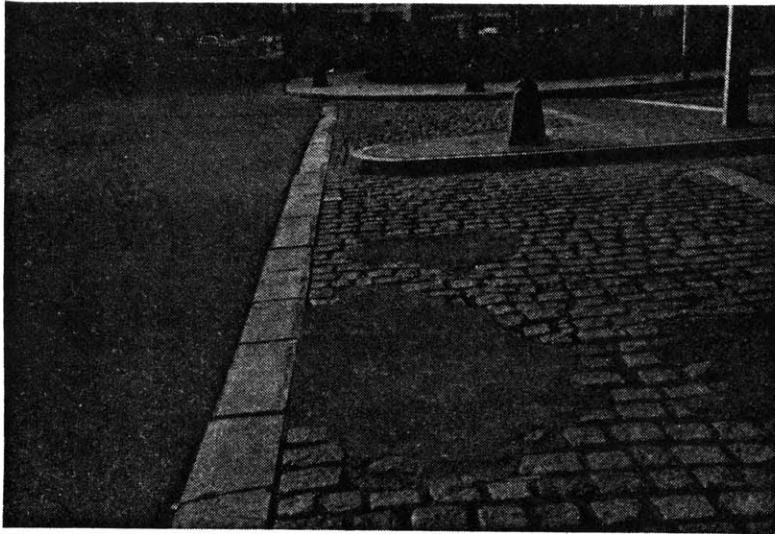
117 Questionably located street hardware.



118 A stronger visual connection is needed along Congress Street between Faneuil Hall and the Old State House.



119 The use of materials and vertical elements to define a circulation path.



120 The use of materials to define different circulation modes. An improvement in street signage would also improve the "way-finding" qualities of the downtown. As described in a report for the Boston Redevelopment Authority, ("City Signs and Lights, A Policy Study" by Ashley, Myer, Smith), a comprehensive system would, ideally, reduce visual overload, clarify traffic control information, provide a sense of orientation in time and space, express city functions, be expressive of individual and group views, provide public information and would seize opportunities for education. Comprehensive guidelines were developed for both pedestrian and

vehicular signage.

Another major type of problem affecting pedestrian circulation is the impediment of flow. Street hardware (for example transit shelters, subway entrances, transformer boxes fire hydrants and mail boxes) often clutters streets, and are insensitively located with respect to pedestrian movement. Conflicts with vehicular traffic are another problem in certain locations, for example the crosswalk on Tremont Street between the Park Street subway station and Winter Street, a major entrance to Downtown Crossing. In this case a major subway entrance/exit on the east side of Tremont Street might alleviate much of this problem.

Major improvements to the imageability of streets linking the various nodes and districts of the downtown would greatly enhance our sense of orientation in the downtown. Major path linkages in the Downtown Crossing area include: the connection from Washington Street to Government Center and Faneuil Hall Marketplace; Tremont Street to the Theater District and to Government Center; and Summer

Street to South Station and perhaps the Fort Point Channel District. Minor, but nevertheless important, linkages are from major paths to minor nodes, for example Post Office Square and Winthrop Square, and between the minor nodes.

The image quality of streets can be enhanced with the use of distinctive light standards, street paving materials, street furniture, signage, vegetation and building edges. The character of Tremont Street is very different, for instance, than Washington Street; and the differences can be reinforced using the above elements. Washington and Summer Streets are more similar in character, as major retail streets, and the similarities could be emphasized. Linkages to, and between, minor nodes should be reinforced, using these elements, but treated differently than major paths to emphasize the difference in hierarchy. The enhancement of imageability would improve our sense of orientation and simultaneously our understanding of the nature of the downtown.

STREET LIFE

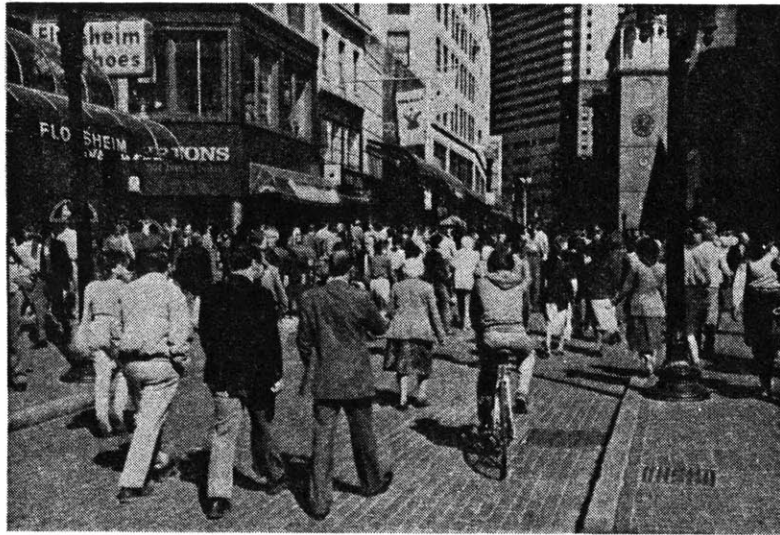
The downtown retail cores of large cities are typically their centers of public activity and street life. Generally one can expect to find a large and diverse retail establishment, high concentrations of people, a wide range of public activities, and the center of the city's nightlife. Boston's retail core in Downtown Crossing has very different characteristics which unfortunately do little to support an active and diverse street life.

As previously discussed, this area fell into economic decline towards the middle of the 20th century, with retail activity, and closely associated public activity, dispersing into adjacent districts and the outlying metropolitan area. The present retail establishment is extremely small in comparison to other cities with a similar metropolitan population. However this situation is beginning to change with the construction of Lafayette Place, and proposals for future retail developments, and over the next decade retail activity in Downtown Crossing will likely increase dramatically.

Another oddity of Downtown Crossing is its startling absence of nightlife. There are no bustling bars, nightclubs, restaurants, theaters and record stores; there are no bright neon or flashing lights to excite one's sense of activity. The only light is the glare from the ornamental streetlights, some minimal retail signage and night-lights in stores. The most apparent characteristic, however, is the destitute quality of the pedestrian streets - no people, no cars, no movement of any kind; even the derelicts have gone.

Street life in Downtown Crossing is a daytime event. As Figure 123 indicates, the predominate reason for being there is shopping. However the recent pedestrianization centered around the 100% Corner, and accompanying street improvements, has enhanced the physical environment for a number of other activities - sightseeing, sitting, strolling, watching people and activity, reading a newspaper, and just hanging out.

There have been very few surveys analyzing the nature of street life in Downtown Crossing. The most



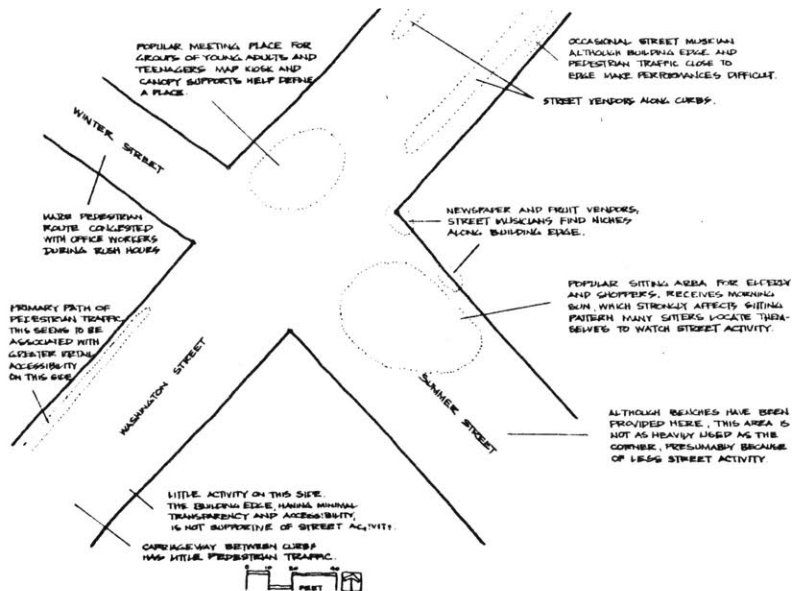
121 Washington Street at noon hour, mid-week.

applicable study in this regard was a pedestrian interview survey, carried out between 1978 and 1980, as part of a study of the impacts of the Downtown Crossing pedestrianization. ("Downtown Crossing: Auto Restricted Zone in Boston," by the U.S. Department of Transportation and Urban Mass Transportation Administration). Trip purposes were identified and categorized, and the relative numbers of people associated with each trip category were then indicated in chart form, (Figure 123). Although the study provided some useful statistical data it

did not probe into the qualitative or perceptual effects of the pedestrianization, nor did it give much sense of the characteristics of the various user groups.

In order to identify and better understand the various user groups, several days throughout 1983 were spent making personal observations of people and activity patterns in Downtown Crossing. These observations, while being very limited in scope, provided some general impressions about the street life.

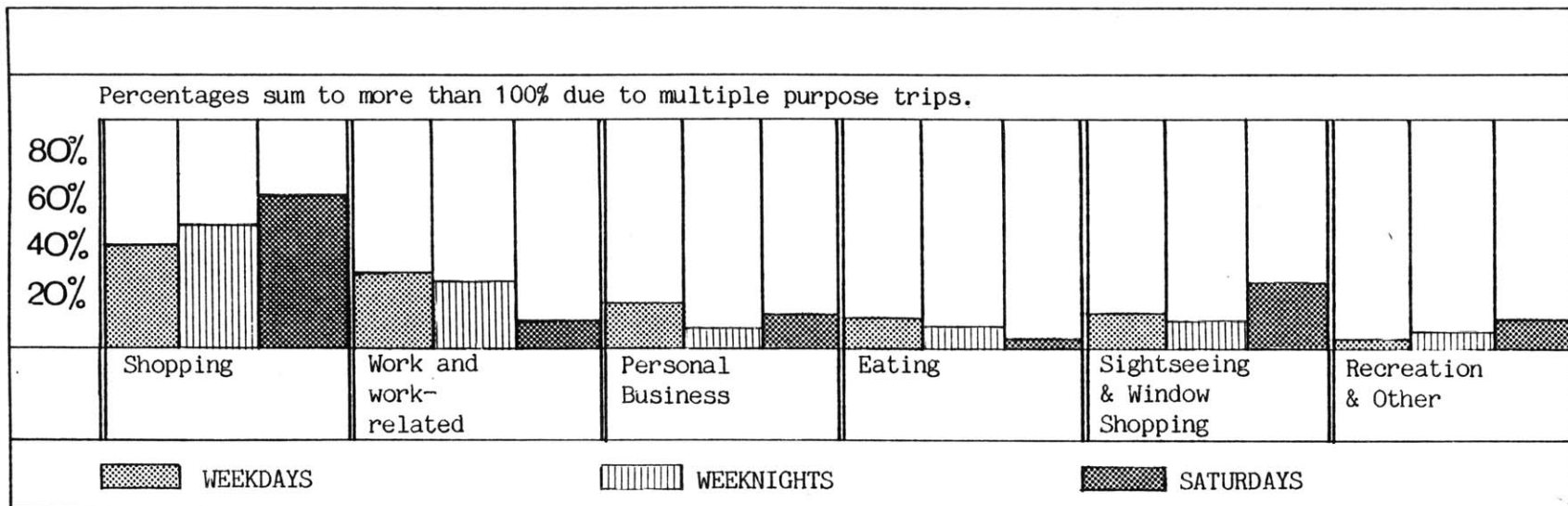
A much more extensive survey would be useful to those involved in either the design or management of public open space in the downtown. Particularly useful information would include attitudes towards, and perceptions of, the public environment of the downtown and the range of desired qualities. This would ideally involve in-depth surveys with representatives of various user groups, using such survey techniques as those developed by Kevin Lynch et al.



122 Activity patterns around 100% Corner in Downtown Crossing.

123 Purpose of Visits to the Downtown Crossing Area

(From: "Downtown Crossing: Auto Restricted Zone in Boston," by U.S. Department of Transportation and Urban Mass Transportation Administration).



In observing people and activity patterns in Downtown Crossing a number of user groups became apparent, which were identified based upon the characteristics of their activity patterns. There are certainly overlaps between groups. Additionally, a more extensive survey might reveal other groups or categorize user groups, or behavior patterns, differently.

On weekdays, streets in Downtown Crossing bustle with downtown employees during the morning rush hour, noon hour and evening rush hour. There are approximately 300,000 employees in the downtown, accounting for almost half of the visitors to Downtown Crossing during weekdays. The high number of employees in Downtown Crossing is attributable to the proximity of the Financial District, most of which is within a five minute walk of Downtown Crossing.

Many employees walk through the Downtown Crossing area on their way to and from work (particularly those using the subway), many eat lunch there, and many shop there, either during noon hour or after work. Downtown Crossing streets, particularly the pedestrianized streets, are frequently used by downtown employees, including many businessmen, as an area to stroll, catch some sun, watch activity, socialize and relax during noon breaks.

Following the morning surges of downtown employees on weekdays, the streets in Downtown Crossing are filled with shoppers. This group is composed of primarily women, many of whom are middle-aged, only occasionally with children. Presumably many are housewives. Associated street activities appear to be minimal, but include sitting, eating and listening to street musicians.

Small numbers of elderly people, predominately male, are generally seen during the mornings and afternoons, throughout the year, sitting along the benches between Filene's and Jordan Marsh. Many seem to enjoy the sun and the copious activity around.

The microclimate of this area is particularly favorable for sitting outdoors.

Young adults often use Downtown Crossing as a place to hang out during mornings and afternoons, particularly on weekends, enjoying the ambience of crowds and activity. A favorite haunt is 100% Corner, which generally has the highest concentration of street activity in Downtown Crossing. Socializing and watching nearby activity appear to be the primary activities of many young adults, particularly male. Teenage girls appear to be more oriented to window shopping and shopping for small items, tending to socialize in couples or, occasionally, small groups.

Street musicians and vendors are a highly visible element of the street life in Downtown Crossing and are, in fact, major generators of street life. Musicians and vendors are present for as long as the crowds are present, that is until about 6 p.m., throughout the year. Musicians predominately play solo, finding niches along building edges or corners to play; larger groups, for example steel bands, are heard on occasion. Vendors typically have standard

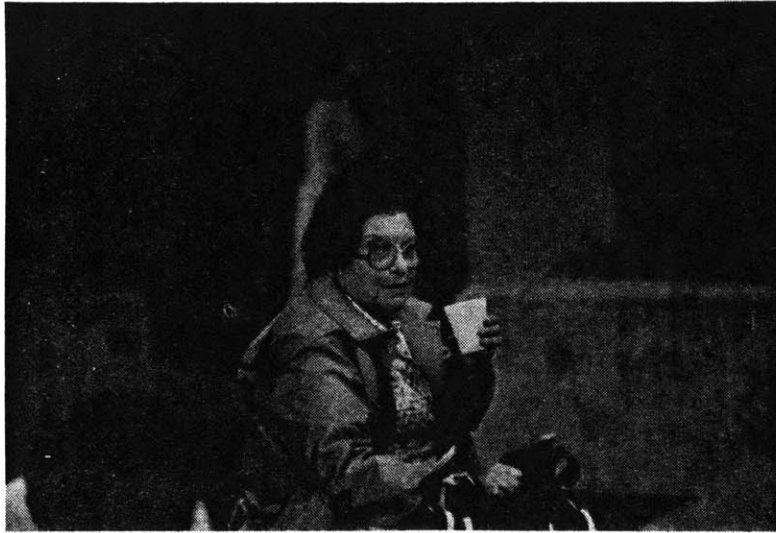
carts from which they ply their trade, in goods ranging from fruit to knickknacks; those selling a larger number of goods often have makeshift counters along building edges. As with musicians, vendors are concentrated in the pedestrian streets.

Several tourists visit Downtown Crossing, particularly in the summer and fall seasons. Although not as popular as the Faneuil Hall Marketplace, the Downtown Crossing area has many visually interesting and historic features. It appears to be a side trip for many tourists who are visiting nearby attractions, in particular the Faneuil Hall Marketplace, or sightseeing along the historic Freedom Trail.

Derelicts, for example, winos and bag women, are frequently seen in the Downtown Crossing area but their numbers are very small. They are generally seen sitting on benches and planters in Downtown Crossing during weekday mornings and afternoons and tend to disappear when the area becomes crowded. Unused dead-end alleys and edges of parking lots are other haunts. It is likely that as Downtown Crossing becomes more heavily used and developed this group



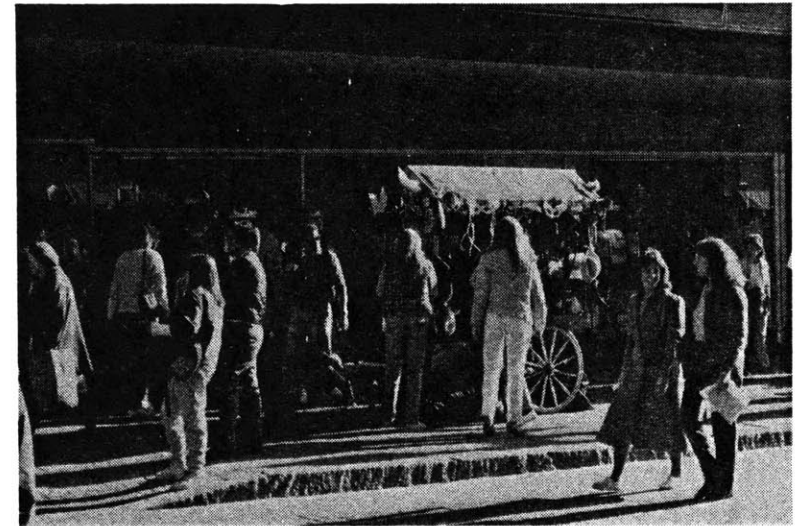
124 Downtown employees are a major user group of Downtown Crossing.



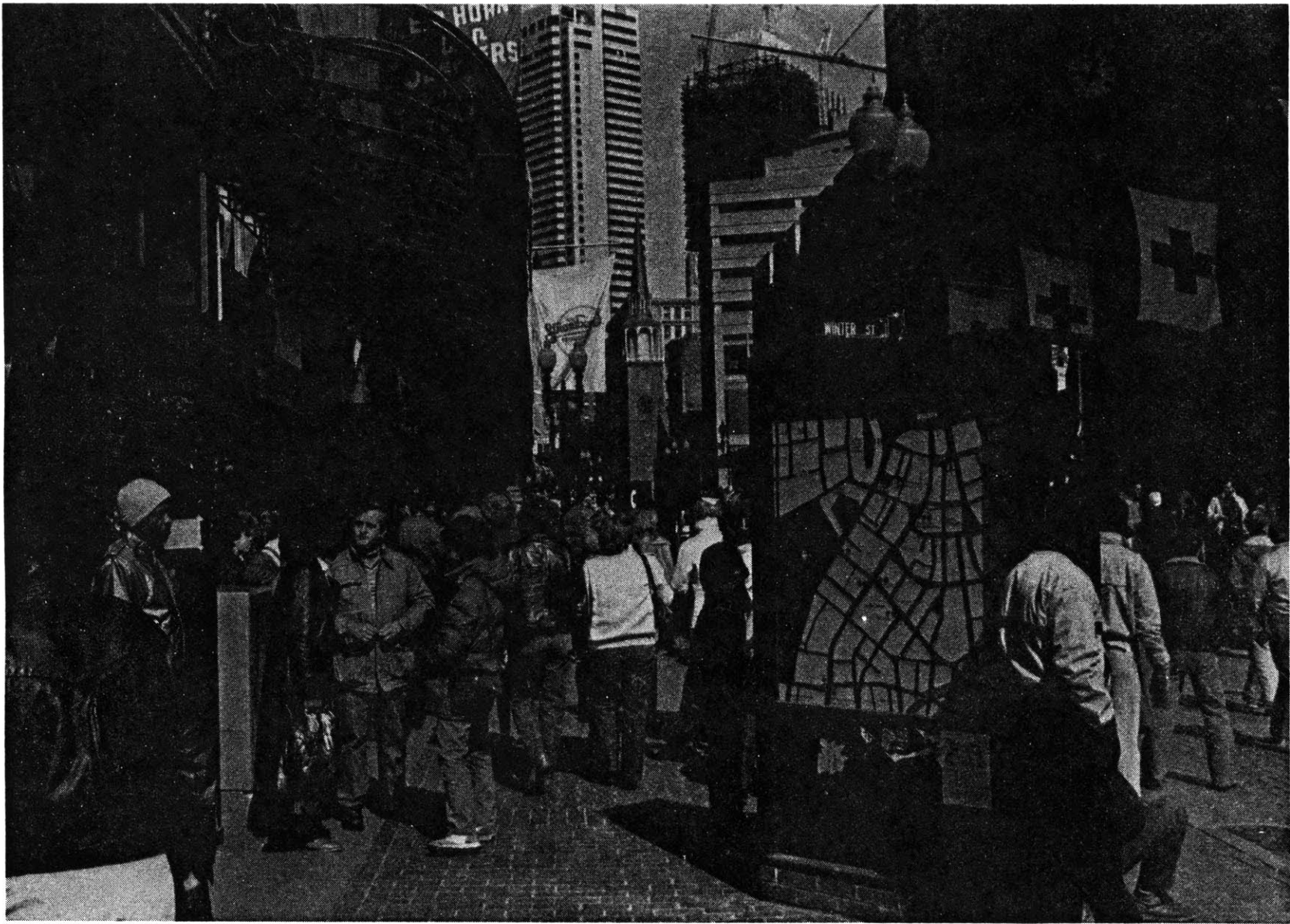
126 Mid-day shoppers.



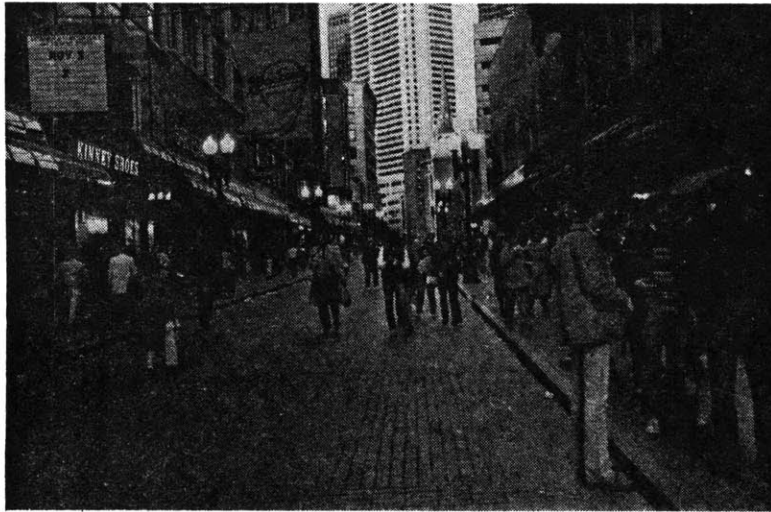
125 Watching street musicians - Filene's plaza.



127 Downtown Crossing - a place to stroll.



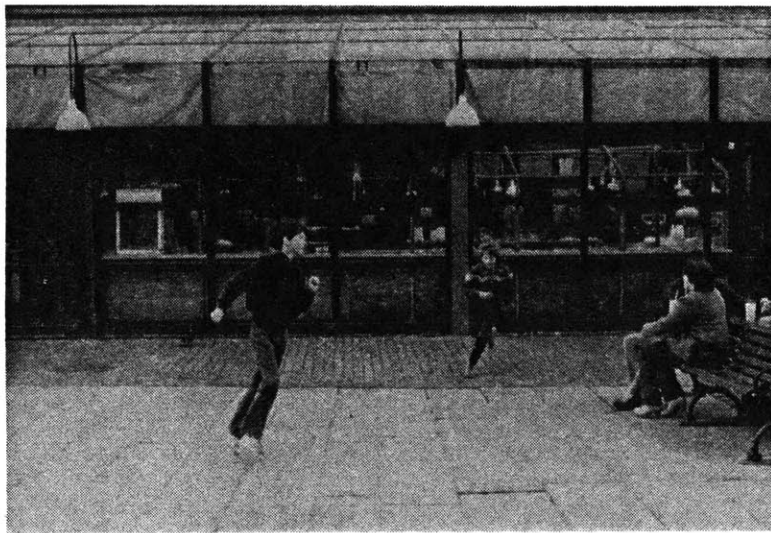
128 ... a place to hang out.



129 ... a place to socialize.



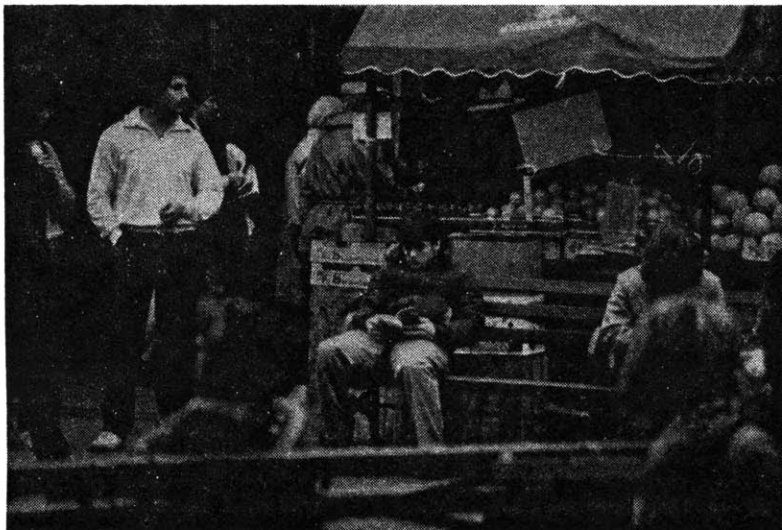
130 ... a place to sit.



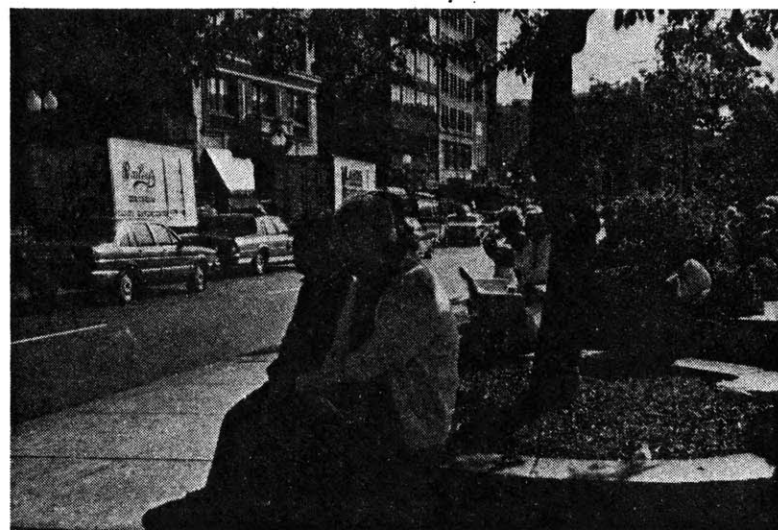
131 Faneuil Hall Marketplace - a place to play.



132



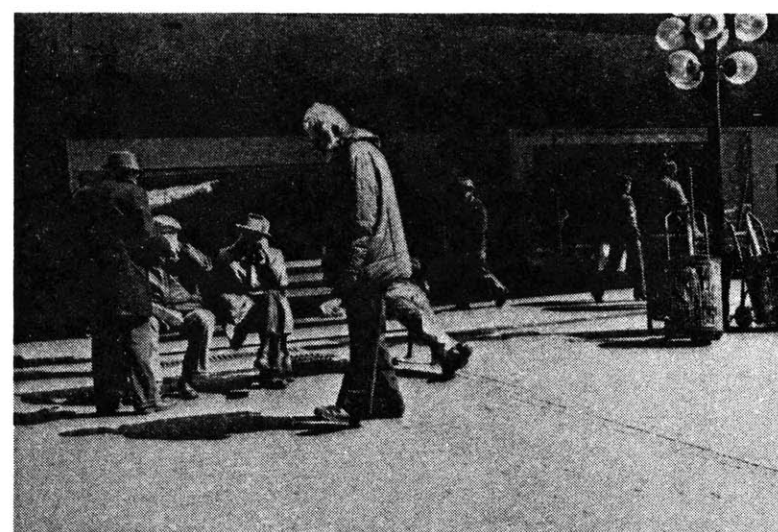
133 ... a place to read.



134



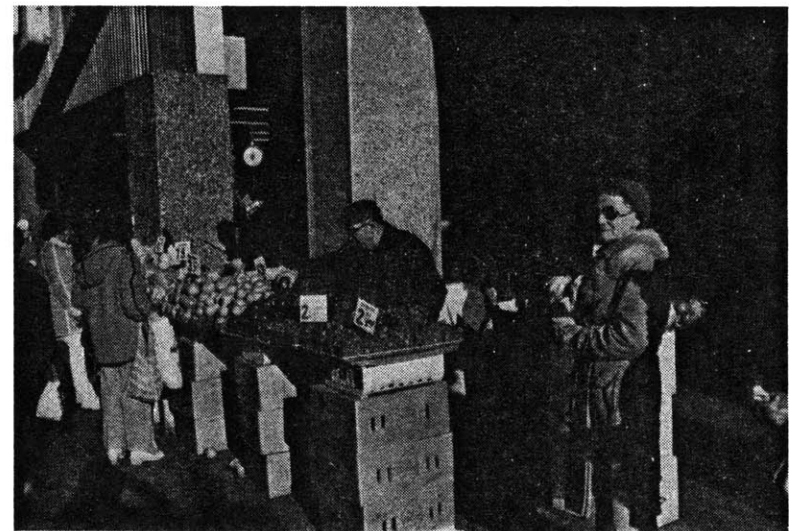
135 ... a place to watch.



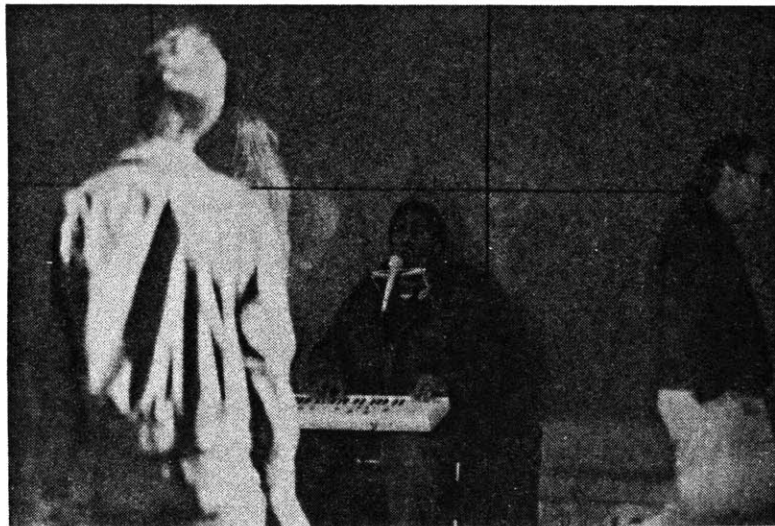
136 ... a place for sun.



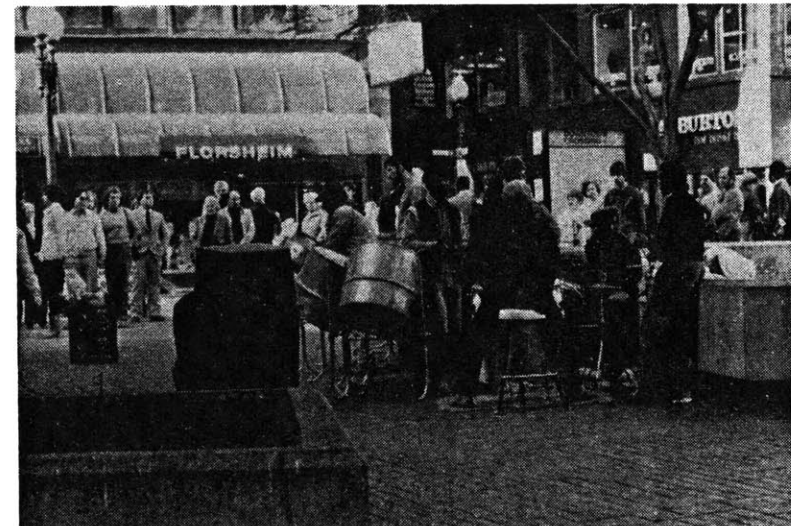
137



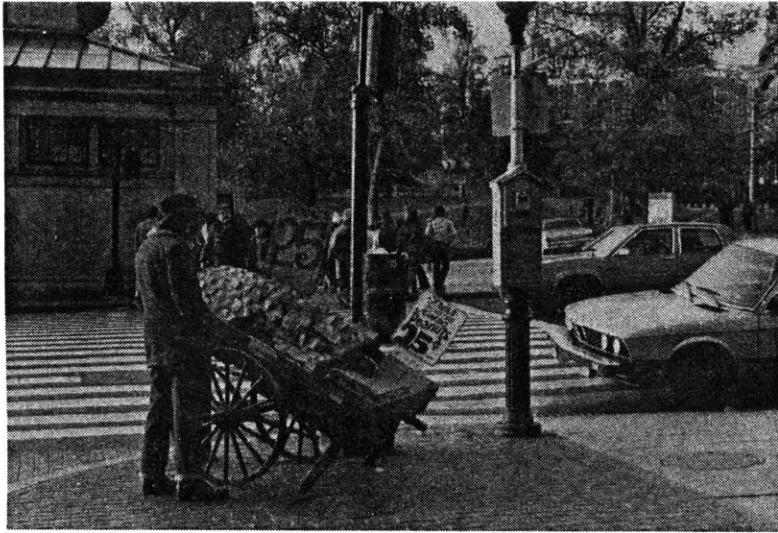
138 Fruit vendor - Washington Street.



139 Street musician - more building articulation would provide niches.



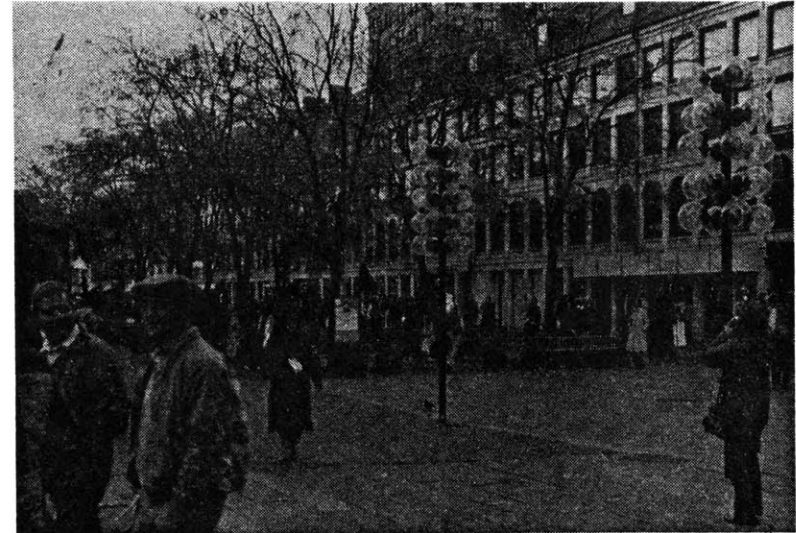
140 Street musicians.



141 Street vendor - near Park Street subway station.



143 Downtown Crossing - a sidetrip for many visitors.



142 Faneuil Hall Marketplace - a major tourist attraction.
may find more "habitable" spaces on the fringes.

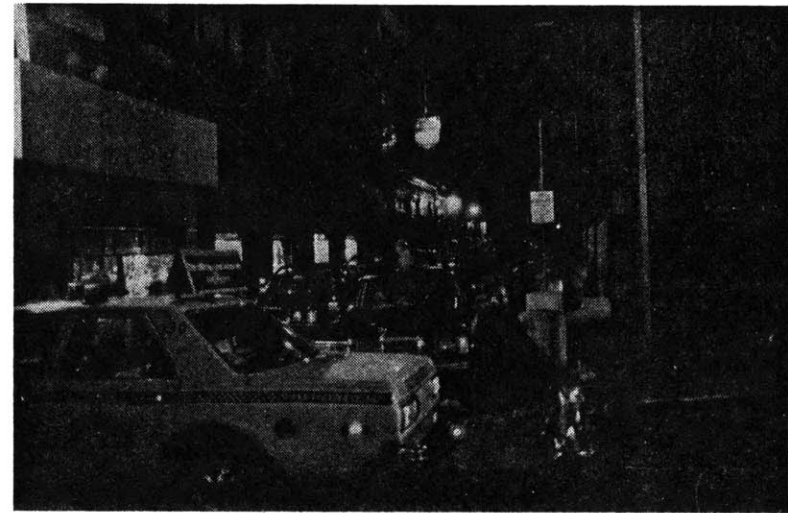
Around 6 p.m. each day the stores close and shoppers disappear from the streets. Losing their audience and market, street musicians and vendors pack up and leave, and very quickly the streets are deserted.

Small numbers of people are occasionally seen in the evening in Downtown Crossing attending theater and dining. A few theaters still remain in Downtown Crossing, notably the Opera House and the Orpheum Theater; however the major theaters are situated in

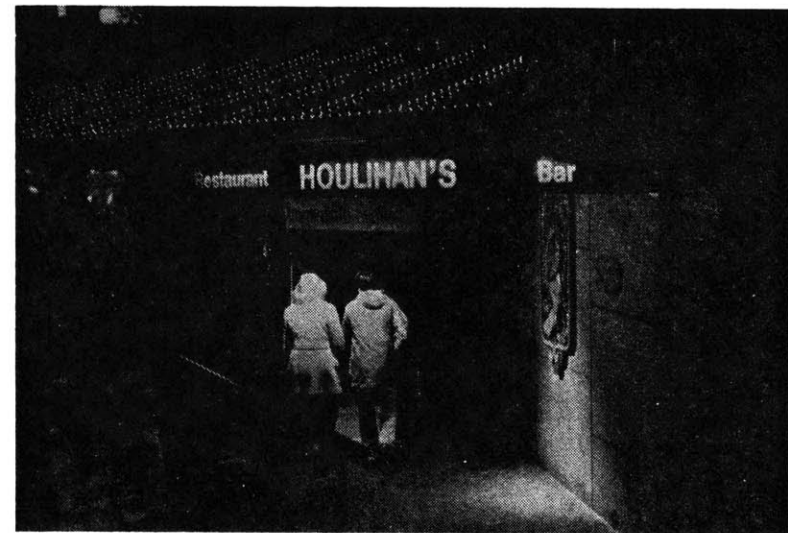
the adjacent Theater District. The Downtown Crossing area also has very few movie theaters, or restaurants. Those who do dine at one of Downtown Crossing's few restaurants, for example Locke Ober, typically park at the front door, or arrive there by taxi, minimizing any contact with the streets.

Many improvements could be made to enhance the street life of Downtown Crossing. The most significant improvement would be the support of an active and diverse nightlife. Stores should be encouraged to remain open in the evenings; building developments should include restaurants, bars, theaters, galleries, exhibition spaces and residential dwellings; and street musicians and vendors should be encouraged to remain into the evenings.

Downtown Crossing is the geographic hub of the downtown, and it is therefore a key element in linking activities between the different areas of the downtown. The temporal aspect of this linkage is important, as illustrated in Figure 148. The absence of evening activity in Downtown Crossing isolates many of the surrounding centers of evening activity



144 Locke Ober's - one of the few restaurants in Downtown Crossing.



145 One of the many bars and restaurants at the Faneuil Hall Marketplace.

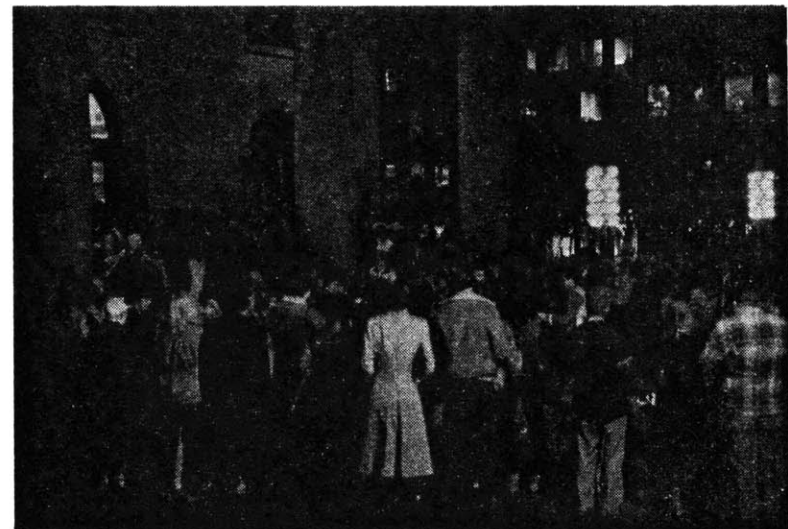
(the Theater District, the Common, Beacon Hill, the Back Bay, Government Center, the Faneuil Hall Marketplace, the North End and the Waterfront) from potential activity interlinks. Nightlife in Downtown Crossing would support and reinforce street life between these districts.

Physical improvements to the street environment should be more responsive to the needs of the various user groups. Seating, canopies and basic services (for example washrooms, telephones and drinking fountains) are requirements of all user groups. Their provision, accessibilities and site locations require careful planning and design, and perhaps public-private agreements for many facilities.

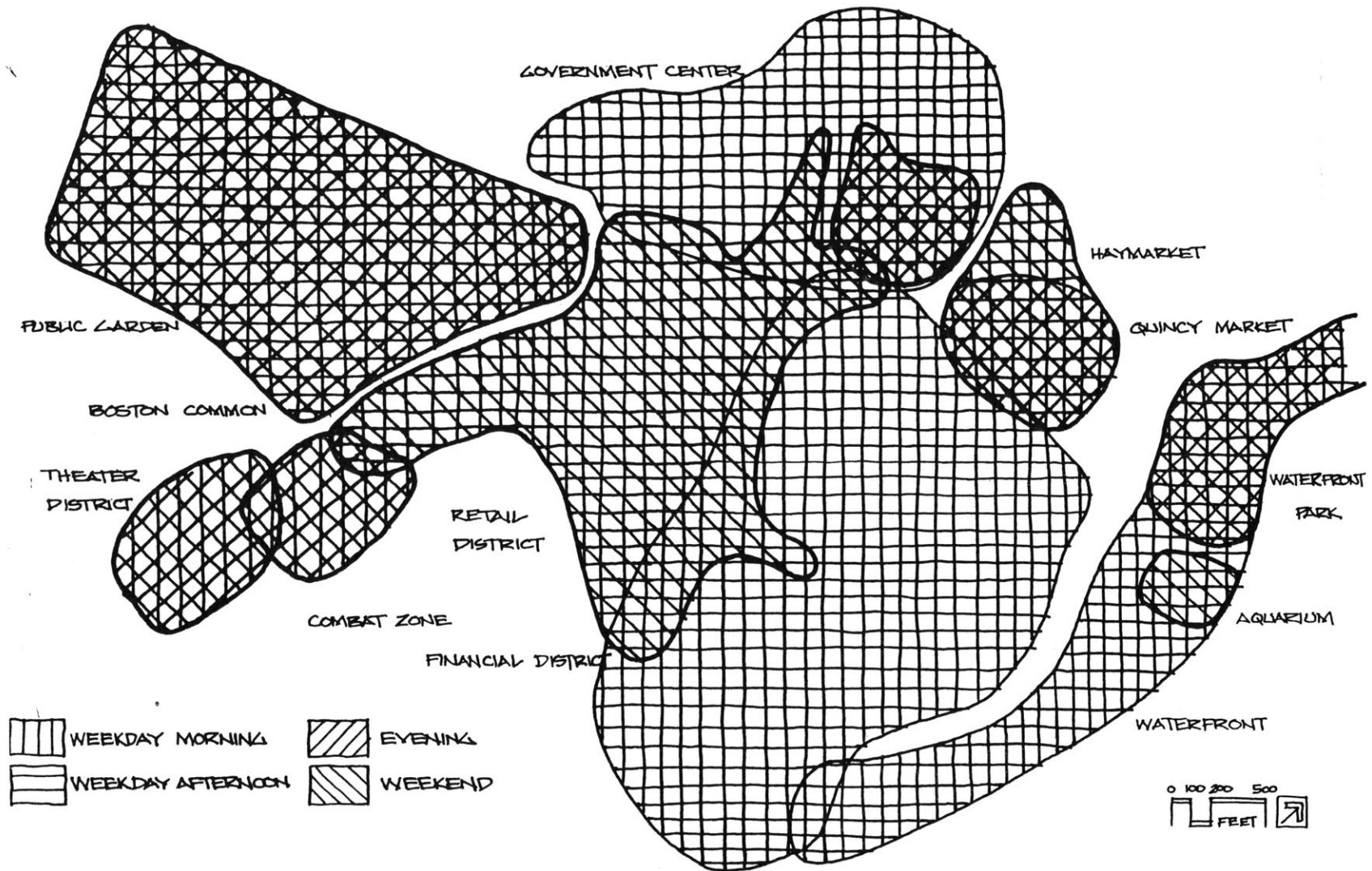
Other major physical improvements include enhancing the imageability of the street network and improved street signage for orientation in the downtown; designing public places with microclimatic consideration; improving the location and arrangement of street hardware; improving building transparency; designing for sensory richness; and improving the forms of urban spaces to better meet function. These



146 Street entertainers enhance the sense of publicness.



147 Nighttime activity - Faneuil Hall Marketplace.



148 Temporal patterns of activity in the downtown.

improvements are discussed in other sections through this chapter.

The potentially diverse nature of street life in the downtown requires a sensitivity in public planning and design responses which recognizes the needs and aspirations of the various users. This is certainly not an easy task for the city administration. The needs and aspirations of the various users should first be identified; differences in age, sex, ethnic background, income, physical disabilities and so on, create widely varied needs. Potential conflicts between users should also be resolved to an acceptable degree. Only then can design implications, issues and approaches be fully addressed.

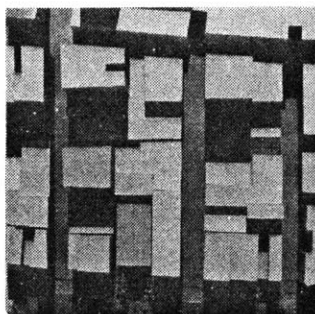
URBAN LANDSCAPE

It is important that people are able to relate to the natural qualities of urban environments - sun, wind, topography, ocean, rivers, vegetation, and so on. The built environment of a city should, at minimum, be sensitive to its particular natural elements. The most appealing, and richly sensory, urban environments tend to be those which have built upon their natural qualities.

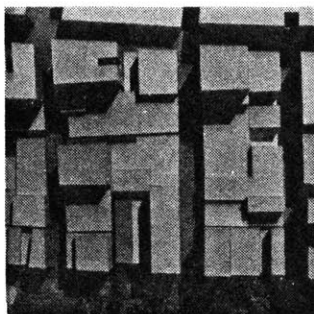
Boston has had, historically, somewhat of an adversary relationship with nature. The once prominent hills were cut down and the waterfront filled. Buildings, such as the Custom House and Quincy Market, which were once closely associated with the waterfront, lost much of their visual significance as the waterfront moved outward. The presence of the ocean was further removed with the building of the Fitzgerald Expressway. The resource potential of the waterfront became generally recognized in the early seventies, and since then, under careful design guidance of the City, waterfront development has proceeded rapidly.

Of the various natural elements, sunlight seems to play the most important role in affecting the quality of public open space in the downtown. The patterns of sunlight and shadow are prominent characteristics of streets in Downtown Crossing. The contrasts are often strong and the patterns temporal. Strong sunlight enhances building articulation, and at an intimate scale, ornamental details. People actively seek sunny locations in the street (unless the temperature is very hot); and in the fall, winter and spring seasons the correlation is very apparent. The patterns of sunlight and shadow are also significant for orienting oneself in the downtown, and are indicative of the time of day, and to some extent, season.

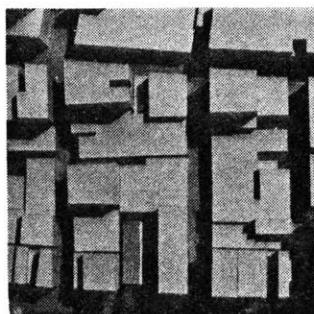
Sunlight and shadow patterns in the central portion of Downtown Crossing were studied using a model, for different hours of day and times of year, (Figure 149). The shadow patterns on the streets were then simplified, (Figure 150), for ease of comparison.



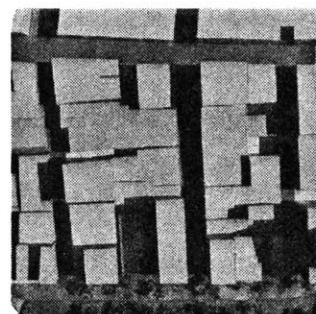
Mar. 21 9:00 a.m.



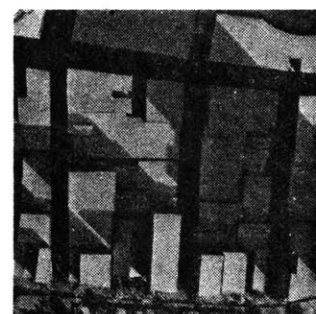
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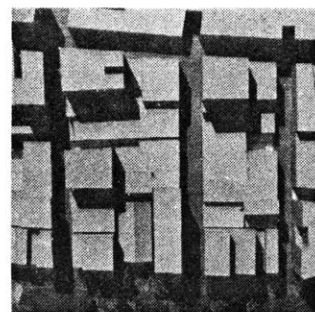
Mar. 21 Noon



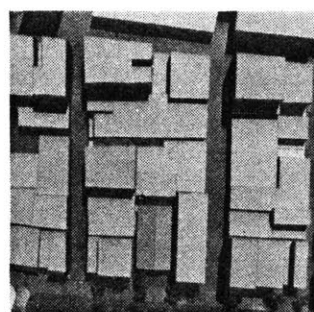
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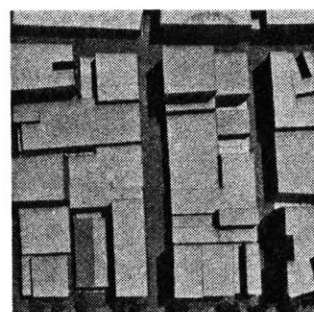
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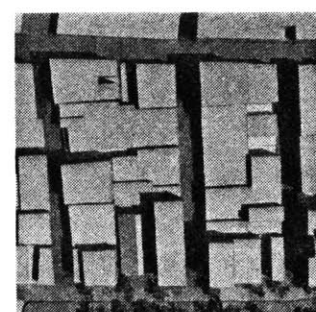
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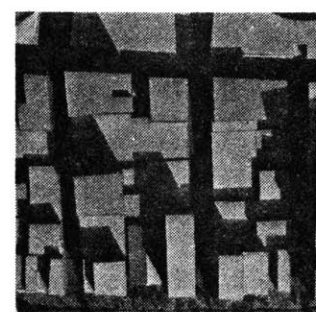
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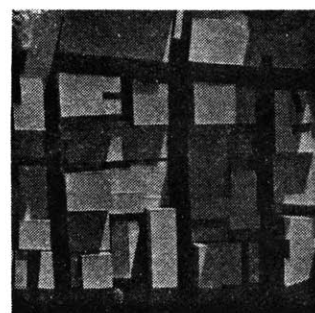
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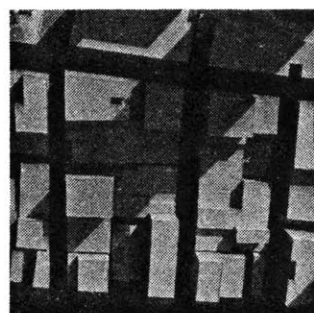
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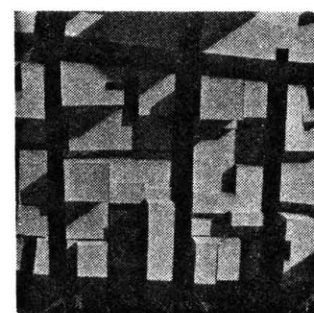
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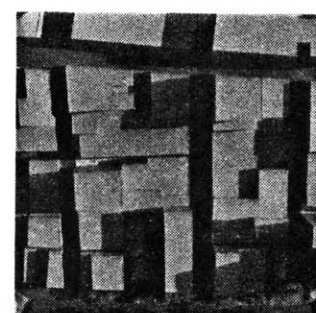
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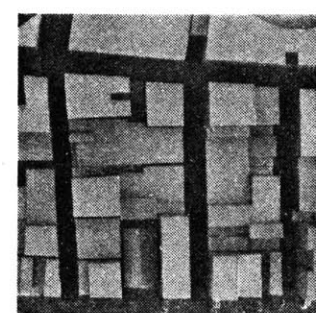
Dec. 21 11:00 a.m.



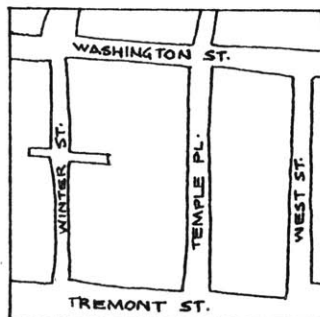
Dec. 21 Noon



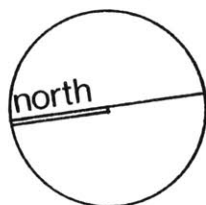
Dec. 21 2:00 p.m.



Dec. 21 5:00 p.m.



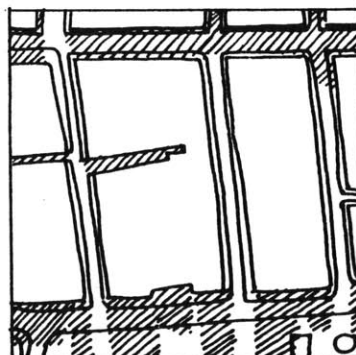
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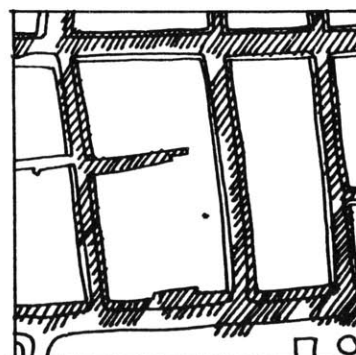
◀149 Downtown Crossing: Daily and seasonal changes in sunlight - shadow patterns.

Downtown Crossing: Diagram of daily and seasonal changes in shadow patterns.

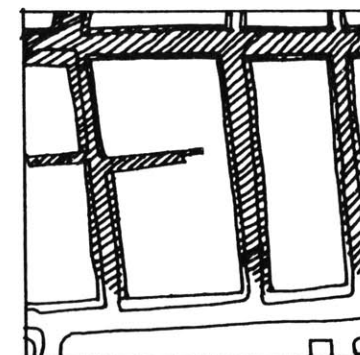
150 ▶



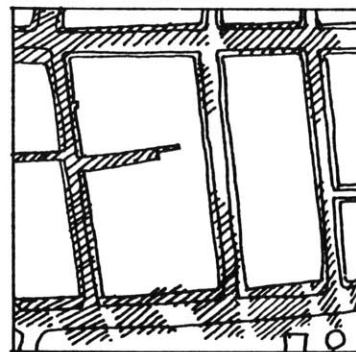
Mar. 21 9:00 a.m.



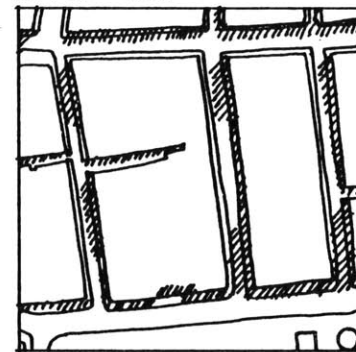
Mar. 21 Noon



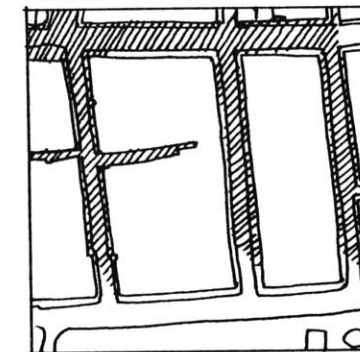
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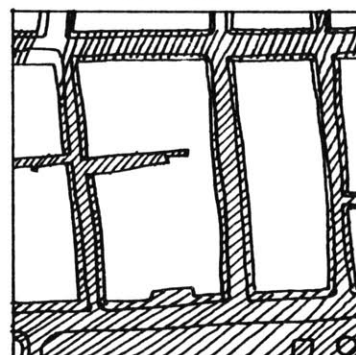
June 21 9:00 a.m.



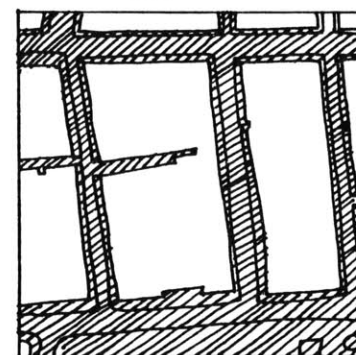
June 21 Noon



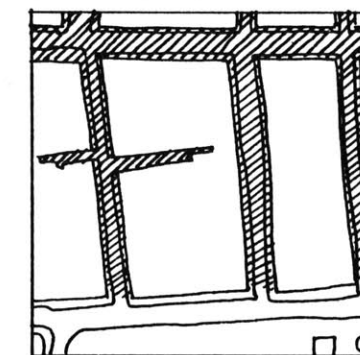
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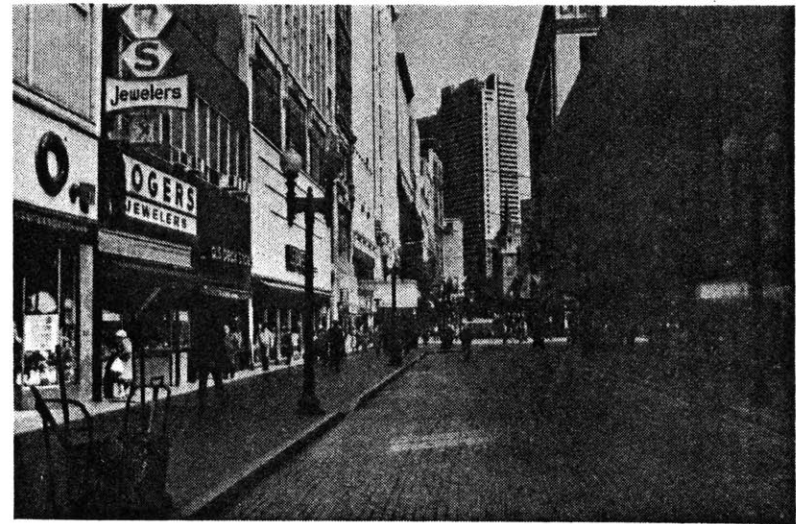
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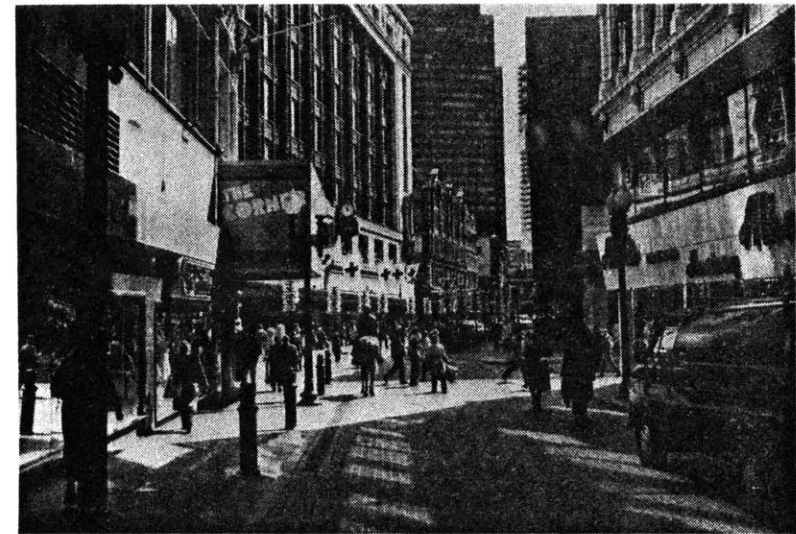
Dec. 21 5:00 p.m.

In addition, on-site photographs of sunlight conditions were taken on spring equinox (approximately March 21) which show a higher level of detail and the perspective of a pedestrian. The sunlight patterns for a bright day at the fall equinox (approximately September 21) are the same.

The times in which individual streets are in sunlight, partial sunlight or shadow are summarized in Figure 157. One of the sunniest areas is the 100% Corner (the intersection of Winter/Summer and Washington Streets). This quality enhances its sense of place, particularly when entering from Winter Street which is generally much darker. The west side of Washington Street, opposite the Jordan Marsh building is also a relatively sunny area, particularly between mid-morning and mid-afternoon. Summer Street, between Filene's and Jordan Marsh, is very sunny during morning hours throughout the year, although there are few hours of sunlight on the street surface in December. This is a popular sitting area in the mornings even in cold weather. This is illustrated in Figure 158, taken in mid-morning on March 19 when the temperature was 36°F.



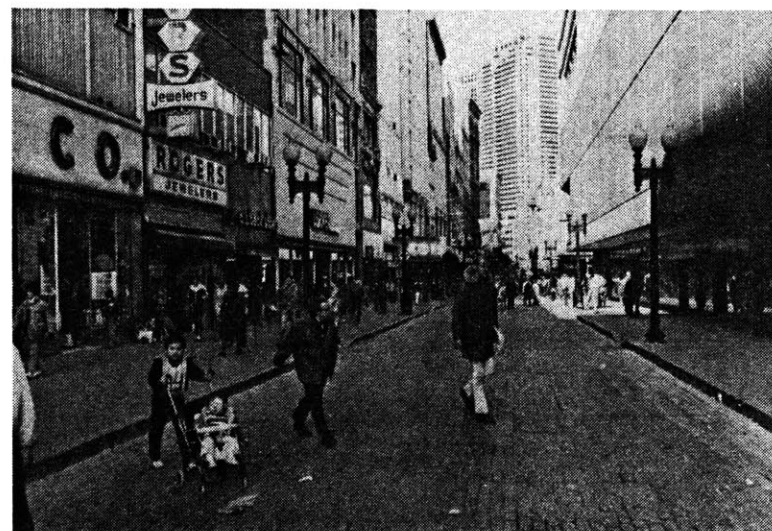
151 Washington St. Mar. 21 10:30 a.m.



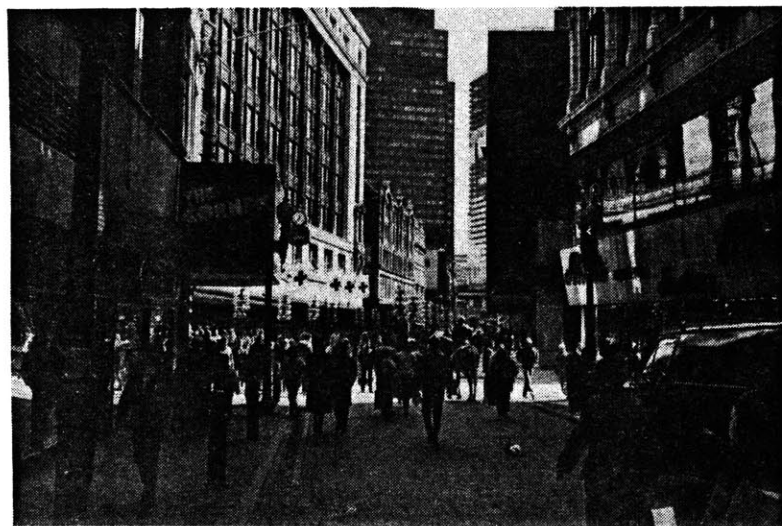
154 Winter St. Mar. 21 10:30 a.m.



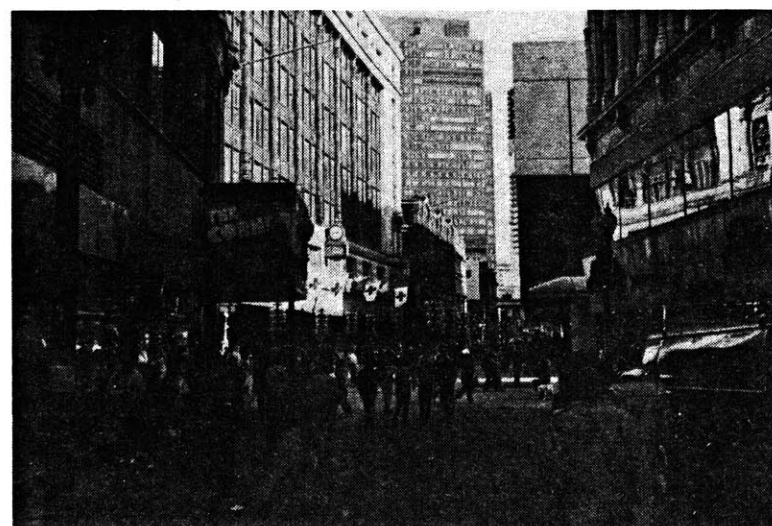
152 Washington St. Mar. 21 12:30 p.m.



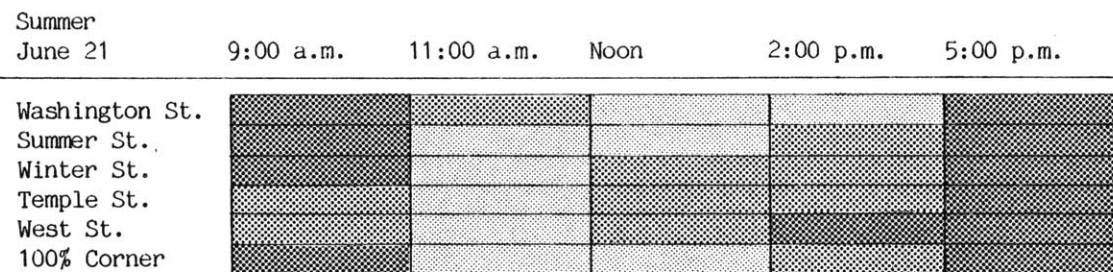
153 Washington St. Mar. 21 2:30 p.m.



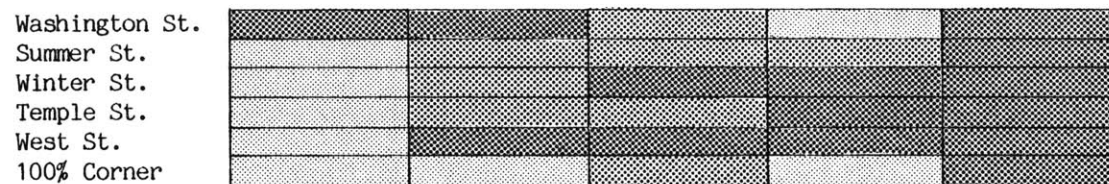
155 Winter Street St. Mar. 21 12:30 p.m.



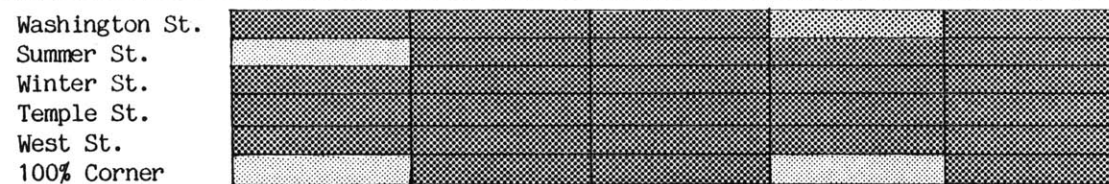
156 Mar. 21 2:30 p.m.






Spring/Fall
Mar. 21/Sept. 21



Winter
Dec. 21



-  Sunlight (>75% sunlight on street surface)
-  Partial Sunlight (25%-75% sunlight on street surface)
-  Shadow (<25% sunlight on street surface)

157 Changes in sunlight conditions by street.



158 Sitting area between Filene's and Jordan Marsh.

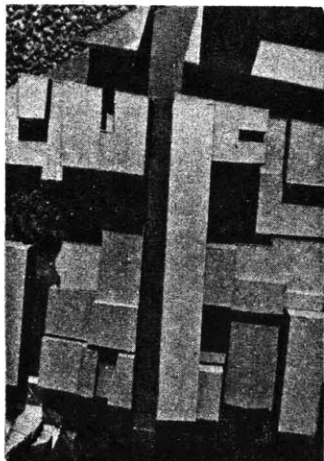
The wind protection, due to surrounding buildings, is another significant factor in making this a pleasant place to sit on cold days.

The "ladder" streets (Winter, Temple and West Streets) are in shadow much of the day - which reinforces their canyon-like characteristics. Winter and Temple Street receive morning sunlight on their street surfaces but by approximately mid-afternoon they are in shadow. At the height of winter, December 21, they are in virtually total shadow throughout the day. Both streets receive some

morning and noon sunlight in their mid-blocks because of lower buildings there. Higher buildings on the ends of these streets result in much more shadow cast at the street ends.

If in the future the building height goes to its present limit, at a 10 F.A.R. zoning, the sunlight-shadow patterns will change significantly. This was tested for Winter Street. The building edge was extended to 10 stories in the model; sunlight studies were then carried out for the height of summer and the spring and fall equinox, (Figure 159).

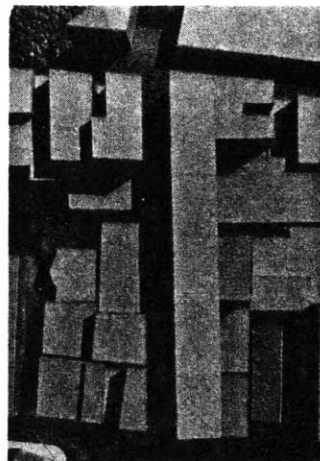
On June 21 the sun is over the north side of Winter Street at 9:00 a.m.; and at a 10 story buildup on the north side, the street surface is totally in shadow; at present some sunlight reaches the street. At noon much of the street surface is in shadow; at present it is predominately in sunlight. The shadow pattern at 5:00 p.m. extends well up the north wall of Winter Street, resulting in virtually no wall reflection, and a very dark street indeed.



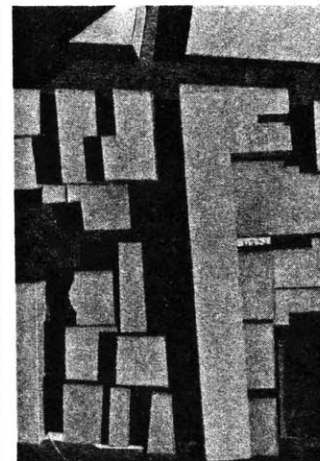
Mar. 21 9:00 a.m.



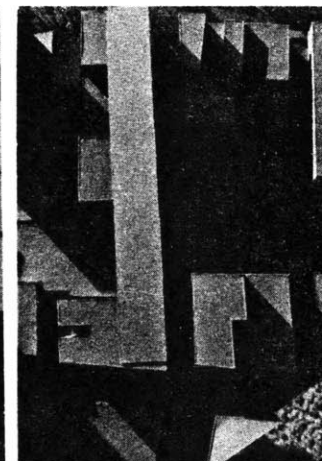
Mar. 21 11:00 a.m.



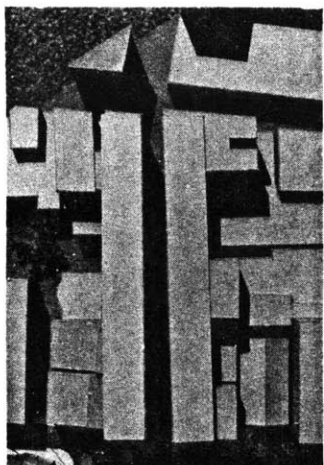
Mar. 21 Noon



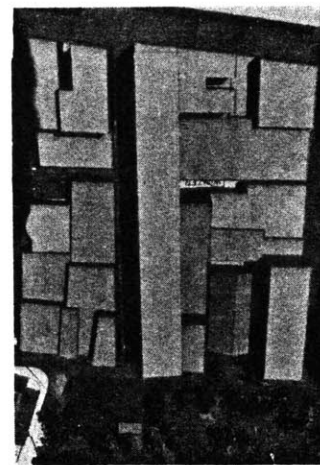
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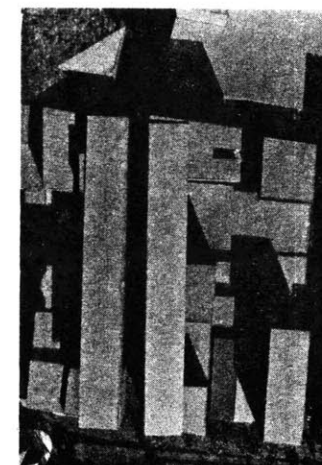
Mar. 21 5:00 p.m.



June 21 9:00 a.m.



June 21 Noon



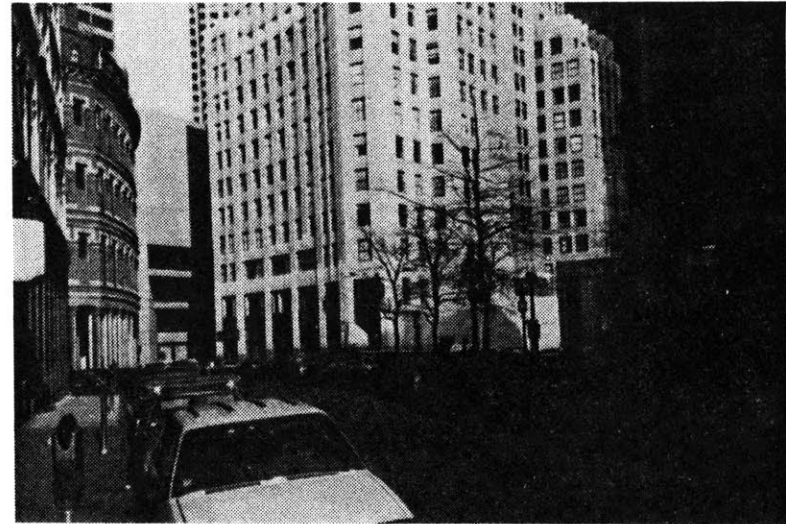
June 21 5:00 p.m.

159 Winter Street: Sunlight-shadow patterns with a 10 F.A.R. build-up.

During spring and fall equinox the sunlight is parallel to the direction of the street at 9:00 a.m., and the street is therefore in full sunlight. At 11:00 a.m. and noon it is in total shadow with a 10 story buildup, compared to partial sunlight at present; and from noon on, the shadow deepens, extending well up the north wall and resulting in a very dark street.

Although perhaps there is no immediate threat of a major buildup occurring along the "ladder" streets, it is now that long range implications should be evaluated to avoid future problems. Downtown Crossing is undergoing rapid revitalization and as its image improves to developers, development pressures will increase. The implications of future building development along Summer and Washington Streets, in particular, for sunlight qualities, poses a more immediate problem. These should be evaluated if the most is to be made of "desired" sunlight qualities in public open space.

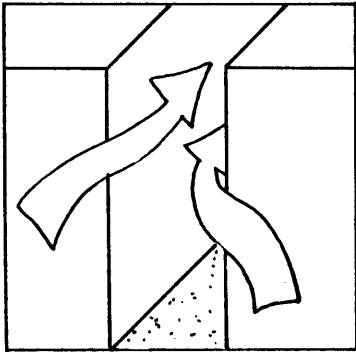
Protection from adverse winds, particularly on cold days, is another important consideration in design



160 Light reflection from building into Winthrop Square.

for public open space. From fall through spring, winds from the west, northwest, north and northeast can be biting cold. Tall buildings, in combination with narrow streets, in the downtown result in substantially increased wind velocities (wind tunnel effect) and wind turbulence.

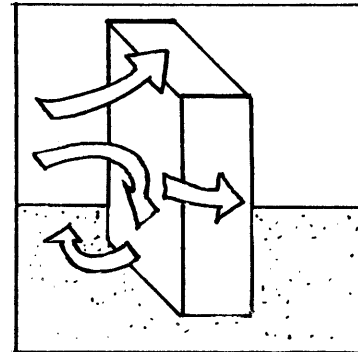
Tremont and West Streets, in Downtown Crossing, are particularly windy streets. Tremont Street is open to west, northwest and north winds. During the winter months, in particular, this seems to be a



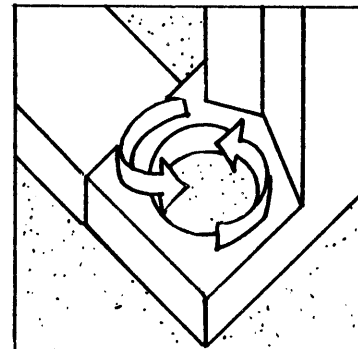
161 Wind tunnel effect.

factor in people's preference for Washington Street, if they are walking north or south in Downtown Crossing. Certainly Washington Street is much more pleasant with respect to winds. West Street receives deflected westerly winds from high buildings on the south side of its intersection with Tremont Street.

Washington Street is fairly protected from west, northwest and northeast winds, and to some extent north winds because of its direction changes. The tower of the new Lafayette Place will increase wind gusts somewhat on the adjacent portion of Tremont Street, although the effects seem to have been ameliorated through the design. Summer Street, between Filene's and Jordan Marsh, is, as previously



162 Wind turbulence near high-rise buildings.



163 Wind turbulence created by Lafayette Place Tower.

mentioned, very protected from winds which is a major factor in its favorable microclimate.

Protection from rain is another concern. The provision of elements for rain protection along building edges, as previously mentioned, is a matter

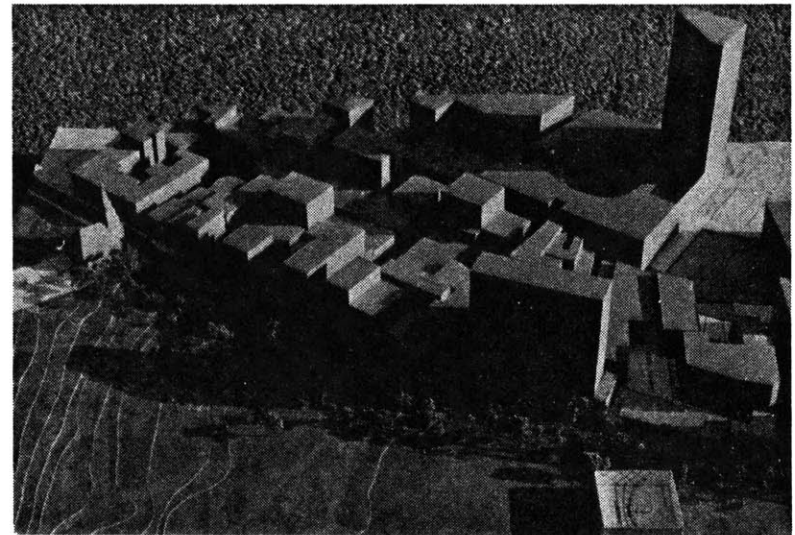
where there has been a great deal of inconsistency. The only consistent stretch of protection is the canopy along the west side of Washington Street between Winter and School Streets. Elsewhere the protection varies from building to building.

Canopies were once widely used in the retail districts of the downtown, providing long stretches of protection. A consistent approach, whether using individual canopies or other architectural elements, or public structures, would surely benefit retailers in the downtown and would contribute to much more pleasant streets.

Topography is another natural element for consideration. Topographic features of a city enhance our sensory perception of it; and often afford some outstanding views. It is also particularly helpful, both visually and kinesthetically, in orienting oneself. Further, it is another dimension of the character of a street, place or district of a city.

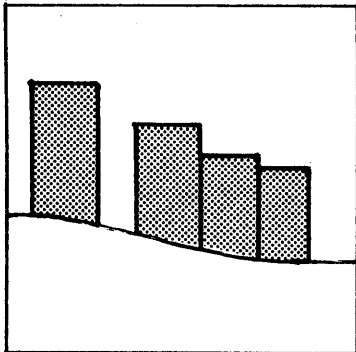
The central portion of Downtown Crossing is situated

on the toe of Beacon Hill. Tremont Street, which is relatively level from Boylston to West Streets rises quickly between West and Bromfield Streets, as can be seen from the contour lines in the model, (Figure 164). The hill falls eastward between Tremont and Washington Streets, with a maximum difference in elevation, near Bromfield Street, of approximately one story, and then levels off.

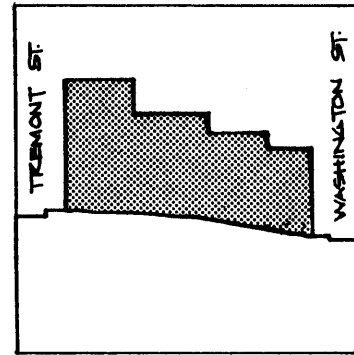


164 Model of Downtown Crossing showing contours.

The general form, or massing, of the buildings should follow, or better, enhance, the topography of the land in order to visually reinforce it. On Tremont Street, for example, a large high-rise apartment building is situated just south of West Street, at the bottom of the hill, and comparatively low buildings are situated at the top of the street, near Bromfield Street. The visual effect works against our perception of the topography. A more appropriate scenario where building form reinforces topography is shown in Figure 165. The same principle holds for the steeper "ladder" streets - Bromfield and Winter Streets. A stepping down of building height from Tremont to Washington Streets, would enhance our perception of the topography, (Figure 166).



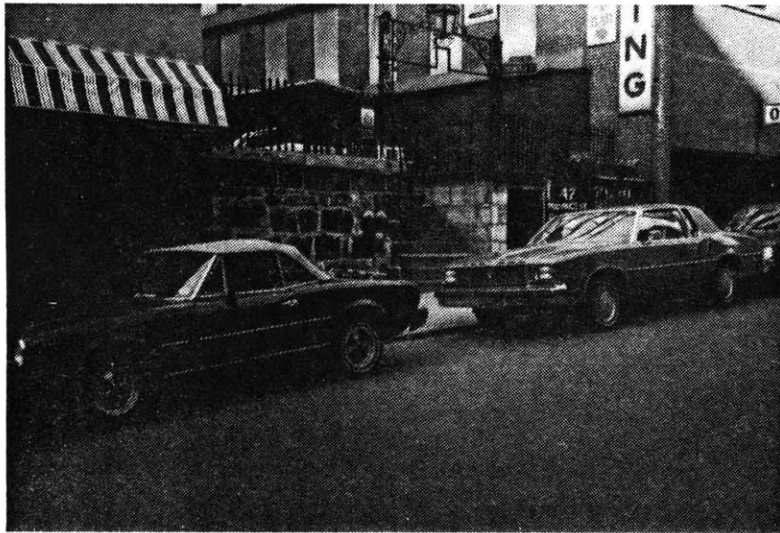
165 Buildings reinforce topography - Tremont Street.



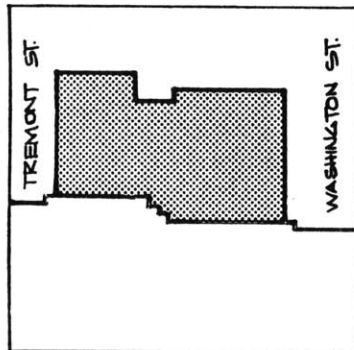
166 Buildings reinforce topography - Winter Street.

Another example of the utilization of topography in design is with the use of steps. Bosworth Street is a fine example of this, (Figure 167). Another potential use is in the interior of the blocks, for example between Bromfield and Winter Streets. If in the future the interior is opened up for public open space, and redeveloped, the elevation change of approximately one story could provide for a very interesting design which reinforces the sense of the natural topography on a small scale.

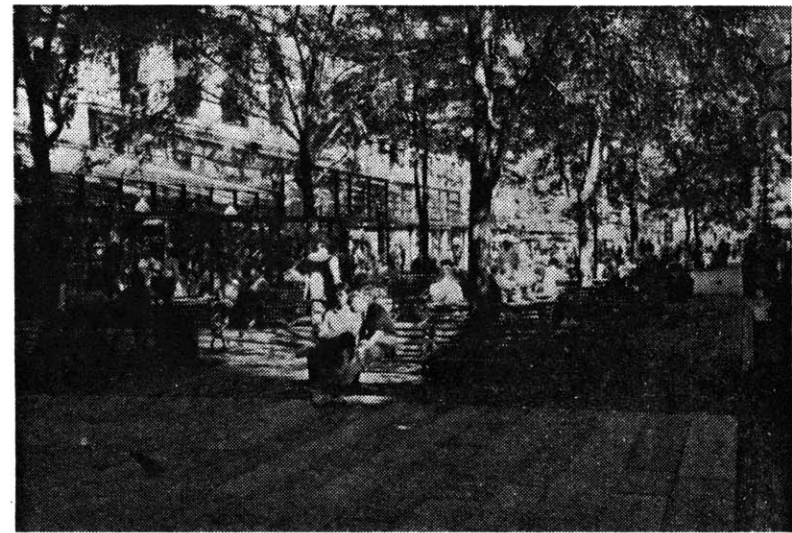
Vegetation is another natural element which is rarely used with much imagination in the downtown. It has, however, considerable potential. When it is used with a sense of continuity, for example the trees



167 Steps connecting Bosworth and Province Streets.



169



168 Vegetation at the Faneuil Hall Marketplace.

along Commonwealth Avenue or Marlborough Street in Back Bay, the image can be very powerful. The key to producing an image is continuity in both form - pattern characteristics and consistency in the use of the vegetation elements.

Vegetation has also an excellent "place making" quality; for example the trees at Faneuil Hall Marketplace, (Figure 168). The form of the trees and their placement define smaller spaces; and their particular characteristics have a sense of intimacy -

the delicacy of the leaves, their swaying in the wind and the temporal sunlight patterns, through the leaves, on the ground surface.

Perhaps too much emphasis has, in the past, been placed on the use of deciduous trees and lawn-type grasses as vegetation elements in the cities. The native vegetation in the New England area is much more extensive in variety - including shrubs, climbing vines, mosses, ferns, numerous wild grasses and flowers, and so on. These would enrich the urban environment, and provide a closer link with the "natural" environment. Children, particularly ones who seldom visit natural environments outside the city, would perhaps benefit most because of their propensity to look at small things and explore the intricacies of the natural environment - to look, touch, smell and taste.

Another characteristic of vegetation is that it has a sense of softness and delicacy. This is most noticeable when it is placed against hard edges - like grass against a rock. The intermix of soft and hard produces a certain richness. Often edges in the

downtown appear too hard, too harsh. The use of trees and other vegetation is a possible solution to some of these problems.

This is not to suggest that the downtown should have a pastoral quality. Certainly its hard, man-made elements are part of its character, and particularly in Downtown Crossing. The placement of building edge to street edge is also an important historic characteristic of Downtown Crossing. Vegetation, where used discretely and imaginatively, can enrich the sensory qualities of the city; however the use of vegetation is better suited to the peripheral areas of the downtown, for example the Common, the old burying grounds and so on. Many streets and plazas in the central core of the downtown are better enriched by hard man-made elements reflecting the tradition of the city.

Architectural responses to the natural environment in the downtown have varied widely, but generally could be considered apathetic, inconsistent and unimaginative. The nature of the relationships between public open space (and associated built form) and the

natural environment require a scope of design consideration on a district or city-wide scale, and evaluations of development scenarios which consider potential changes to the built form of the city well into the future.

Design Proposals

3

DESIGN PROPOSAL 1

IMPROVING THE STRUCTURE OF THE PUBLIC SPACE NETWORK

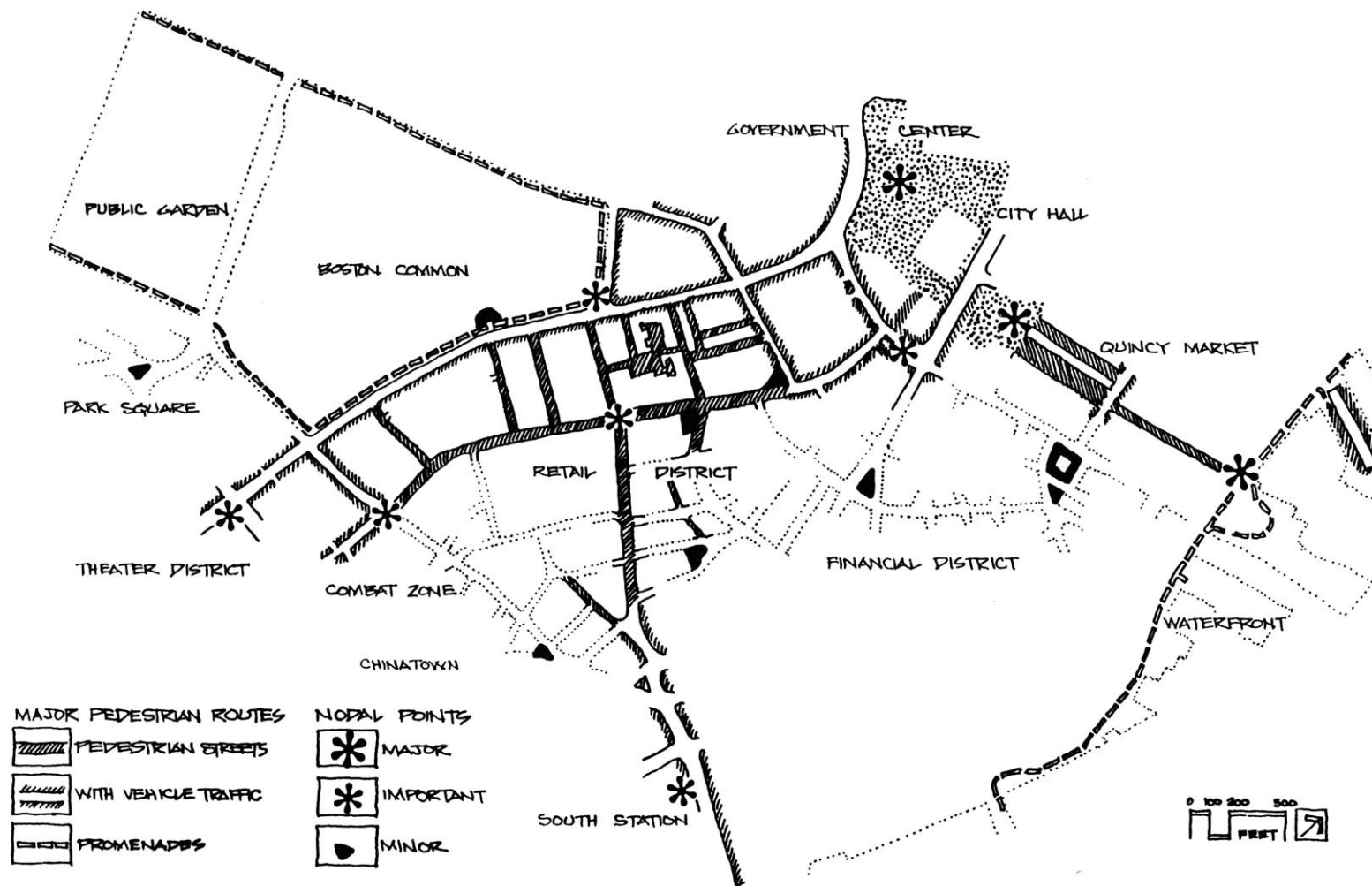
There is little sense of structure in the public space network of the central core of the downtown. The functions of the various nodal points are often not clear, and their surrounding physical developments do generally little to support public activity. Furthermore, the interrelationships between nodal points are not clear. A similar situation exists for the street network; the major streets in the central core do not display strong and continuous images nor do they have much sense of interrelationship.

This proposal seeks to strengthen the sense of function and interrelationship of the public space network in the central core. Figure 170 is a diagram of existing and proposed nodal points and linkages for the Downtown Crossing area. The recent plan for Downtown Crossing (previously referred to in the analysis) generally recognized the important nodes and linkages but the report did not indicate their

desired characteristics or structural relationships, nor did it indicate how minor nodal points might be integrated.

One device for improving the structure is strengthening the nodal points by enhancing their functional and visual identities. Each nodal point is unique and has particular characteristics which can be built upon. For example the junction between Downtown Crossing and the Theater District, on Tremont Street, is a logical nodal point which can build upon the attributes of the theater and retail functions and create a sense of relationship between the two districts.

Another device for improving the structure is strengthening the identities of major streets and their sense of relationship to nodal points. Tremont, Washington, Winter and Summer Streets are the major links to the important nodal points in and adjacent to Downtown Crossing. The pedestrianization of Summer Street from Washington Street to South Station, together with a retail revitalization and providing vehicular circulation where necessary,



170 Proposed improvements to the structure of the public space network of the downtown.

would strengthen the visual and functional link between Downtown Crossing and South Station. Tremont Street has a sequence of important nodal points, as well as the edge of the Common, and the character and image of the street could be integrated and strengthened with these elements. Washington Street, likewise, links a number of important nodal points. Minor nodal points could be visually and functionally integrated into the overall structure by reinforcing public activity on the edges of the nodal points, creating or maintaining visual landmarks at the nodal points, and enhancing the street linkages with, for example, special lighting standards, paving insets and building edge design.

The extension of the pedestrian street network in Downtown Crossing would provide a much more pleasant environment for shopping and other downtown public activities and would be a major element in unifying the retail streets into a highly imageable downtown district. The pedestrianization of Downtown Crossing could be expanded to include: the ladder streets, Washington Street southward to Essex Street and northward to School Street (and perhaps as far as

State Street); and Summer Street as discussed above. There are few constraints to the expansion of the pedestrian district; none of the streets proposed for pedestrianization in Figure are arterial or collector streets and their present vehicular functions are accessing buildings along the streets and parking.

DESIGN PROPOSAL 2

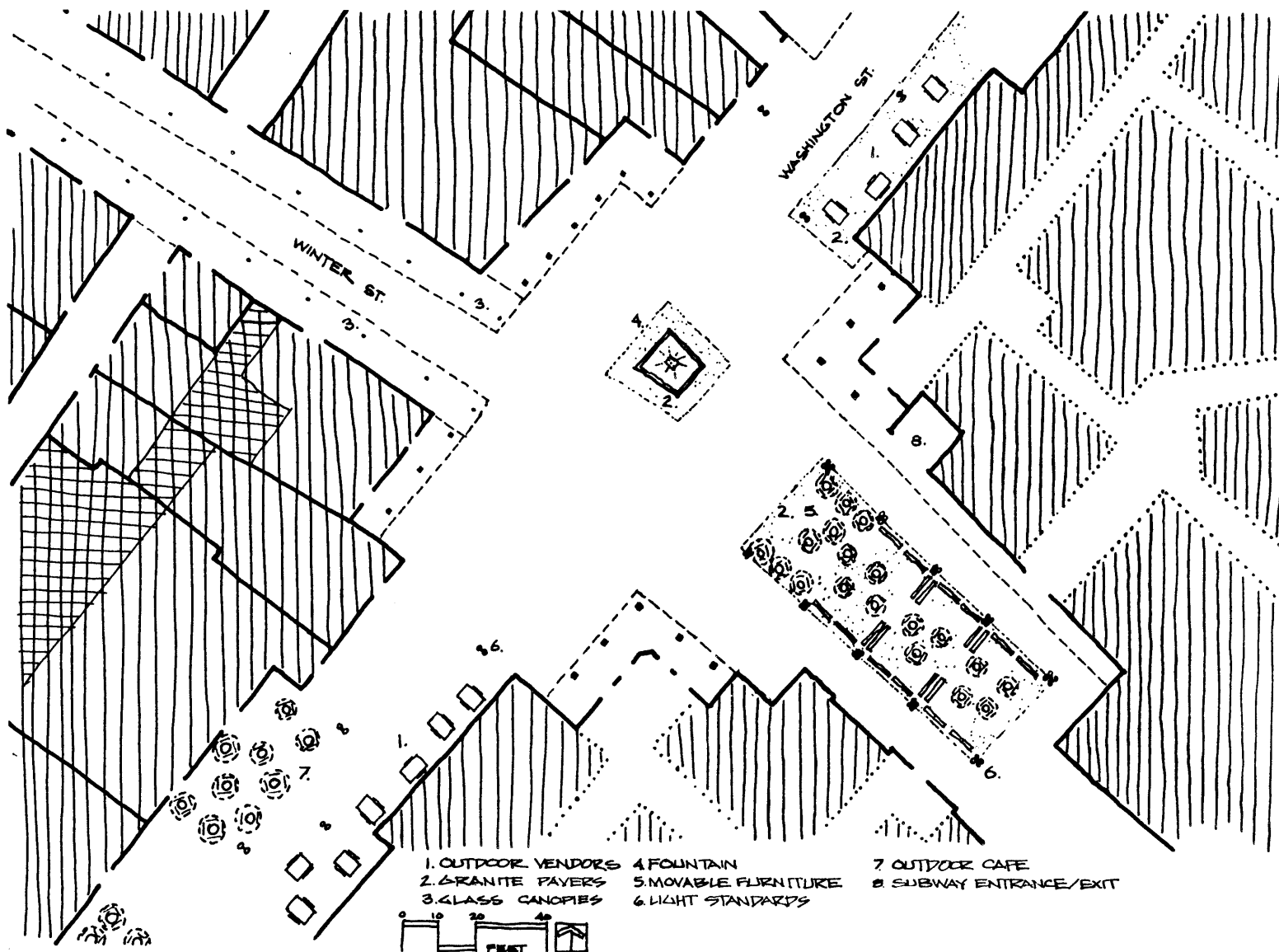
100% CORNER: CREATING A PLAZA

The intersection of Washington and Winter/Summer Streets (100% Corner) is the focal point of Downtown Crossing; as discussed in the preceding analysis it is a major nodal point in the public image of the downtown and a center of street life. Its image however appears to be more associated with Filene's and Jordan Marsh than the street, although the recent pedestrianization and accompanying physical improvements have given the street intersection more sense of "place." Its potential as an urban public space (or better, public "place") appears to be much greater than its present form and edge would suggest. Consideration should therefore be given to changing the form and edges to create a stronger public nodal point or plaza.

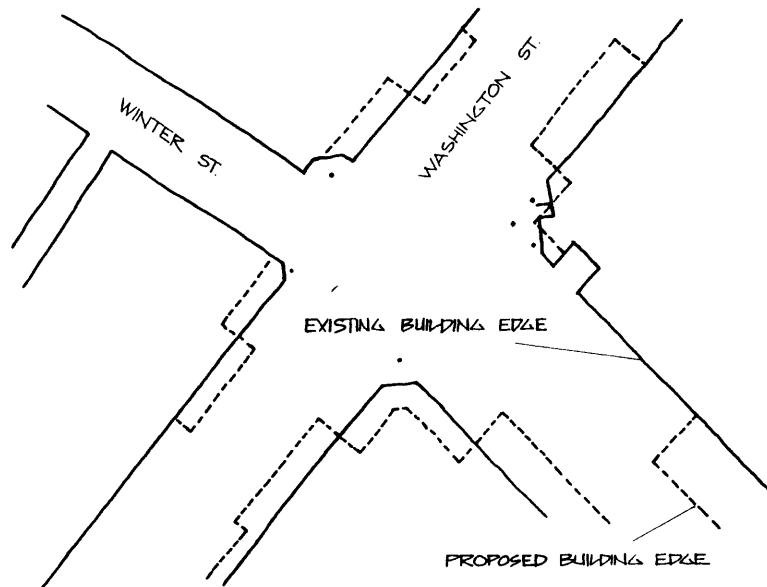
Two design concepts were explored. The first concept (Figure 171) involves altering the form of the surrounding buildings to create more enclosure. The second concept uses street elements to create the

enclosure quality. The concepts are similar in many respects. The sitting area between Filene's and Jordan Marsh is more highly defined with granite pavers and streetlights along its edges, thereby separating the sitting area from the main pedestrian circulation on Summer Street. Although some seating could be fixed, moveable chairs and tables are proposed as they would allow people to choose their own sitting arrangements. Street vendors and outdoor cafes are shown on the edges of the plaza to support the social life of the plaza. A fountain is proposed near the center of the plaza to give the plaza a stronger visual presence in the street and to serve as a gathering or meeting place.

The first concept (Figure 171) alters the form of the surrounding buildings by cutting into a small portion of the buildings (up to 10 feet) at the corners of the streets and building out into the streets (up to 25 feet) further back. The proposed changes to the building edges are shown in Figure 172 . Incentives, in addition to building rights into the streets, might have to be offered to building owners to encourage such a change. Care should be taken, in



171 Proposed plaza at 100% Corner - Concept 1.

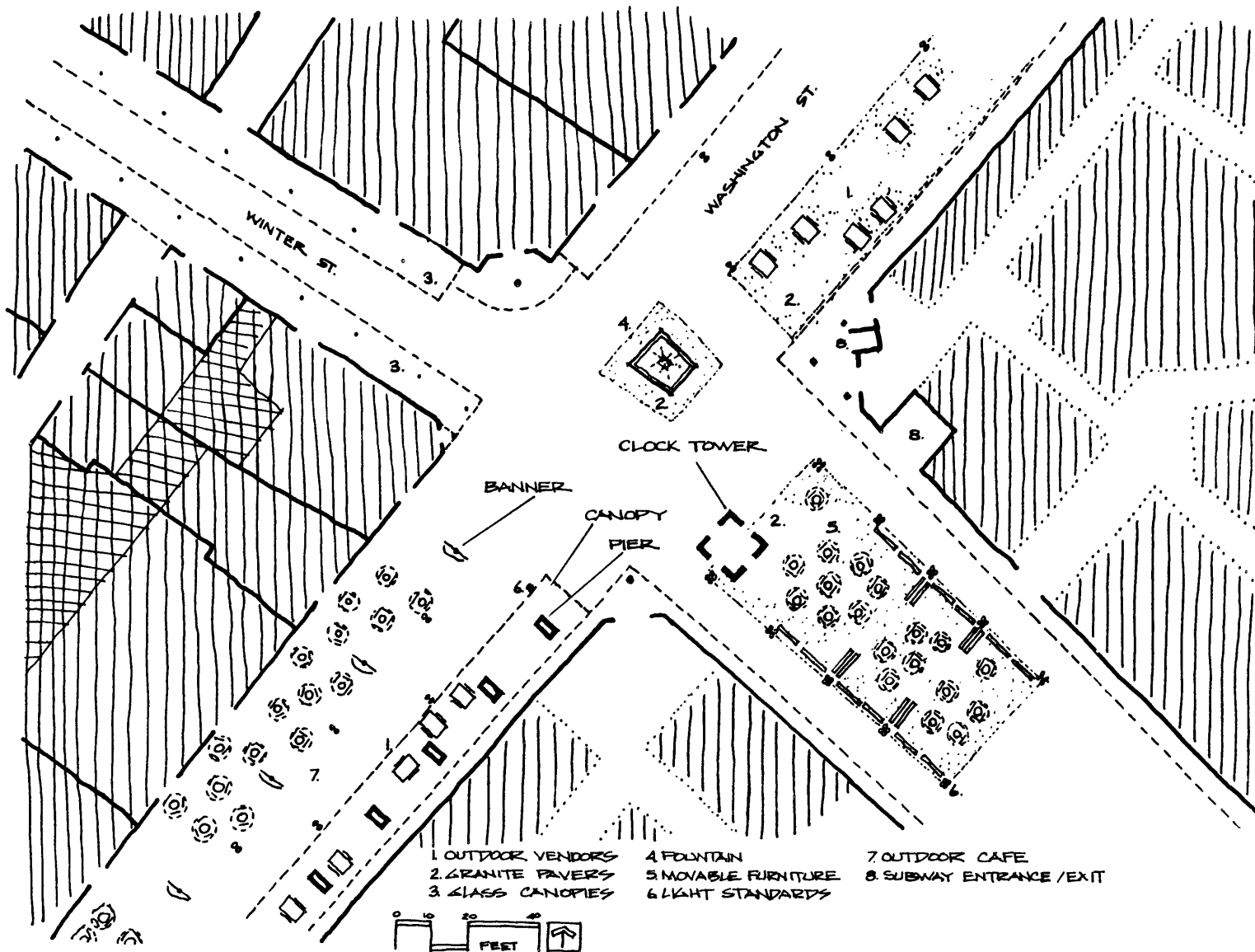


172 Proposed changes to building edge in Concept 1.

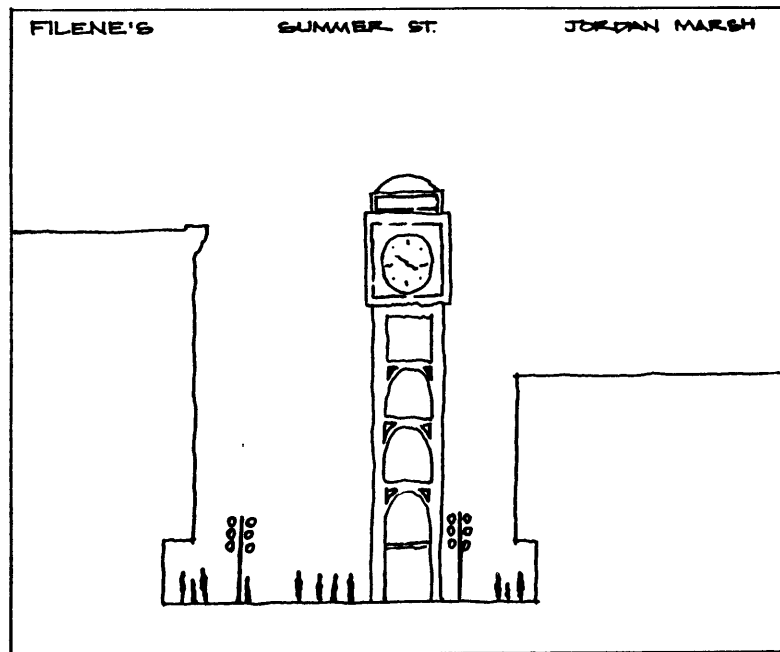
any building extension into the street, to preserve the sculpted facades of the nineteenth and early twentieth century buildings. This can be accomplished with sensitive design and an appropriate use of materials. Glass enclosures have been used in several cases in building extensions to historic buildings, for example the recent extension to the Exeter Street Theater on Newbury Street and, on a larger scale, the Metropolitan Museum of Art in New

York City.

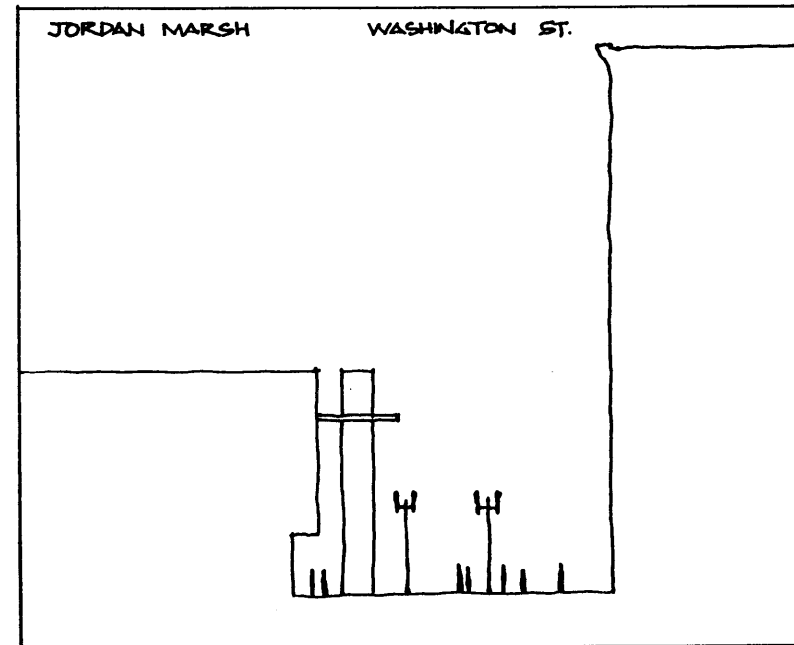
The second concept (Figure 173) uses street elements which are sufficiently large to give a sense of partial enclosure. A clock tower is proposed in Figure 174, between Filene's and Jordan Marsh to give partial enclosure to the plaza on the Summer Street side. The clock tower could be any of a number of designs and materials, but should be compatible with



173 Proposed plaza at 100% Corner - Concept 2.



174 A clock tower between Filene's and Jordan Marsh would give partial enclosure to the plaza.



175 Proposed structure on Washington Street provides partial enclosure and weather protection for street vendors.

both building and street architecture. One type of tower that might be considered is an ornate ironwork structure relating to the existing street hardware; another type is a brick tower. The size of the tower should be similar to the tower of the Old South Meeting Hall. On Washington Street, adjacent to

Jordan Marsh, a pier-like structure is proposed which gives partial enclosure to the south side of the plaza and also offers weather protection to street vendors, (Figure 175); again, ornate ironwork and brick might be considered for building materials.

DESIGN PROPOSAL 3

IMPROVING THE QUALITY OF THE PEDESTRIAN ZONE ON WASHINGTON STREET

Problems with the street environment along Washington Street, particularly between 100% Corner and Temple Street, were discussed in several sections of the analysis. Major problems include the overly strong definition of a vehicular path and sidewalks (breaking a potential continuity across the street), the inconsistency of canopies and other elements for weather protection, the hard edges of the department stores and the lack of physical supports for street life. The present situation is shown in a perspective sketch, (Figure 176). The proposed character of the street is illustrated in Figure 177.

The major design objectives in this proposal are to: create a building edge to edge continuity so that the entire width of the street can be utilized and dominated by pedestrians; and to provide strong physical supports on the building edges for street activity. The curbs are removed in the proposal and

the street surface is reshaped. Streetlight standards, drainage inlets, granite paver insets, and banners provide sufficient path definition for emergency vehicles. The west side of Washington Street opposite Jordan Marsh is proposed as a site for outdoor cafes - it receives noon sunshine and looks onto the proposed 100% Corner plaza. Small building extensions into the street are suggested, as illustrated in Figure 177 , to create edge indentation (similar to Newbury Street) and niches for such edge related activities as outdoor cafes and window shopping. Contiguous canopies, and other elements for rain protection, are proposed for both sides of the street; these can be individual designs, varying from building to building, which link together. A pier-like structure is proposed along the edge of the Jordan Marsh building to provide, as Design Proposal 2 describes, partial definition for the 100% Corner plaza and weather protection for street vendors; the

alternative proposal to this, as Design Proposal 2 describes, is a building extension of the Jordan Marsh building into Washington Street.

would certainly give Washington Street a sense of unity.

The banners are used, in addition to adding color to the street, as elements to help define space. At the edges of 100% Corner they would help define the plaza, and along Washington, as Figure 177 illustrates, they begin to define spaces which are perpendicular to the main channel. Advertising could be displayed on the banners which would pay for their cost and appears to be appropriate for a retail street. The ambience of the street is proposed to be less formal and controlled than, for example, the Faneuil Hall Marketplace or Newbury Street, reflecting more individuality in the built environment. The strong presence of the street architecture and the concentration of street life

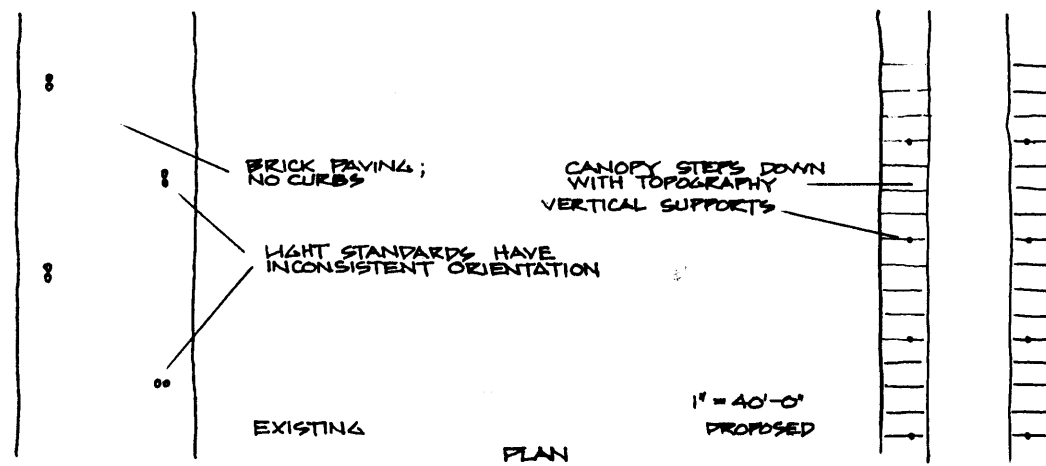
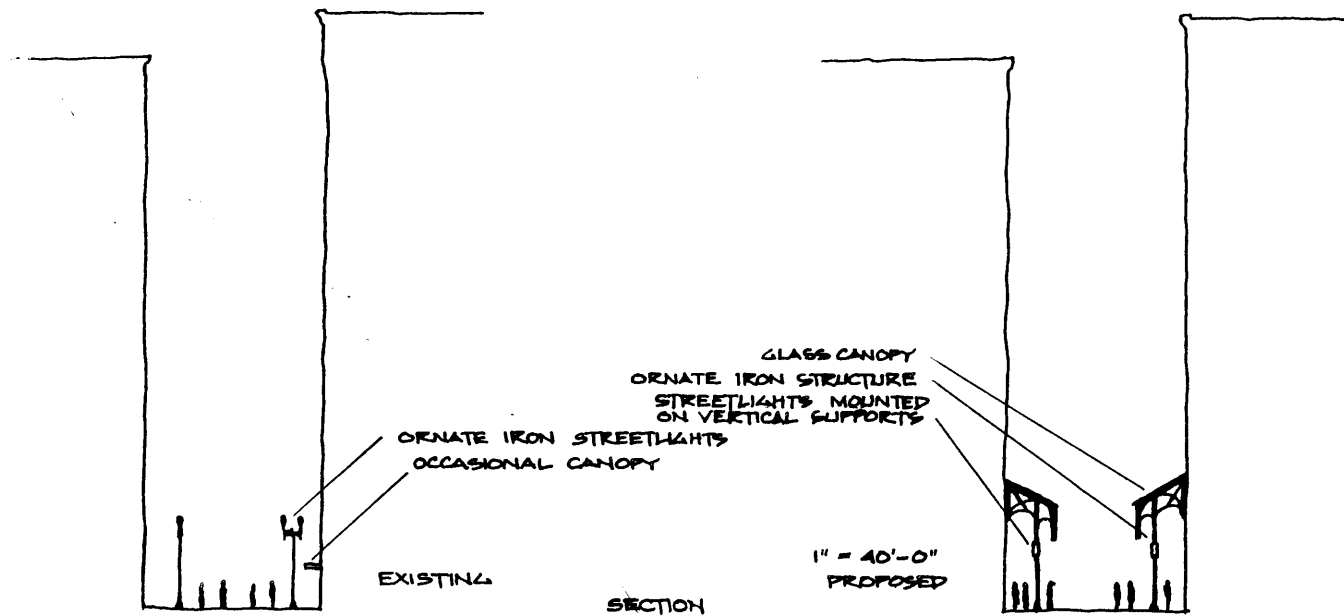


176 Washington Street pedestrian district - existing.



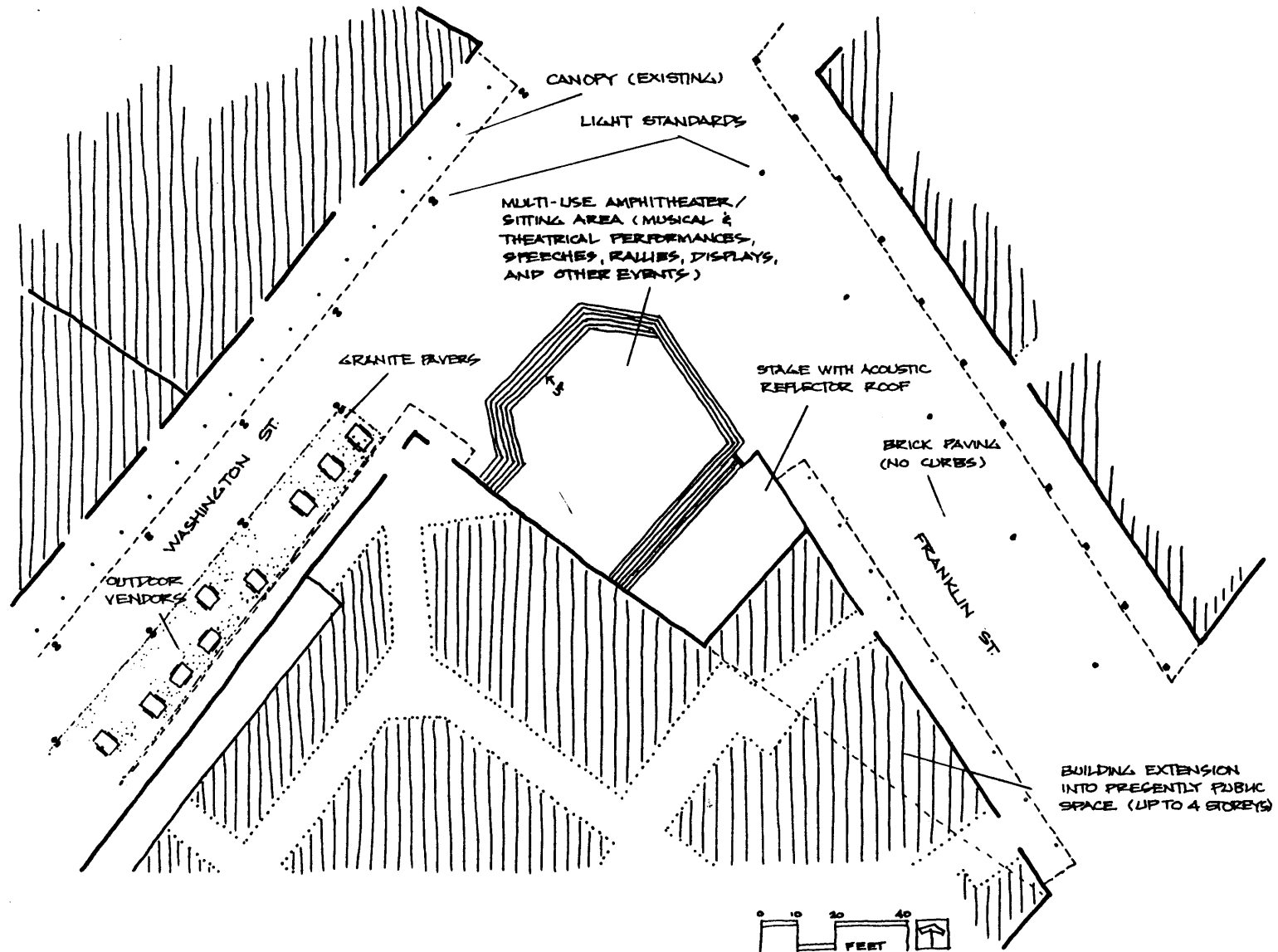
177 Proposed improvements to the Washington Street pedestrian district.

DESIGN PROPOSAL 4



178 Proposed glass canopies on Winter Street.

DESIGN PROPOSAL 5



179 Proposed improvements to the plaza at Washington and Franklin Streets.

DESIGN PROPOSAL 6

STRENGTHENING THE OLD STATE HOUSE AS A NODAL POINT

The Old State House occupies a key site in the historic downtown, and the strengthening of this nodal point would provide much stronger interrelationships between Downtown Crossing, City Hall plaza, Faneuil Hall Marketplace and the Waterfront. The interrelationships are presently rather weak and the nodal point itself lacks vitality. The proposal uses the historical context of the Old State House as a basis for design for two reasons. Firstly, this was the site of the famous Boston uprising against British troops in 1770 (a major event in the American struggle for independence), and secondly, the built environment around the Old State House does not reinforce its presence; the building stands isolated both visually and in terms of historical association.

Life-size sculpture of 18th century British soldiers and Bostonians, depicting either this historic event or street life at that time, are proposed at the base

of the Old State House, along State Street (towards Long Wharf) and along Congress Street towards Faneuil Hall. The sculpture would provide a stronger visual link between these areas and give a stronger sense of cultural relationship with the past. The life-size sculpture (perhaps bronze castings), placed at street level at the base of the Old State House and along medians and/or sidewalks on Congress and State Streets, would allow pedestrians to intermix with it; the street in effect would become an exhibit gallery. It is also proposed that the concrete and asphalt surfaces be replaced with cobblestone, at least at the base of the Old State House, across the intersection of Congress and State Streets, along the median strip on Congress Street, and along the edges of the sidewalks on Congress and State Streets. The existing streetlights should be replaced with cast-iron standards; these should perhaps be similar to the present streetlights along Washington Street in Downtown Crossing to reinforce the pedestrian linkage. As previously mentioned in the analysis, night-lighting from the inside of the Old State House would give a stronger sense of the internal space of the building.

3 The BLOODY MASSACRE perpetrated in King-Street BOSTON on March 5th 1770 by a party of the 29th REGT.

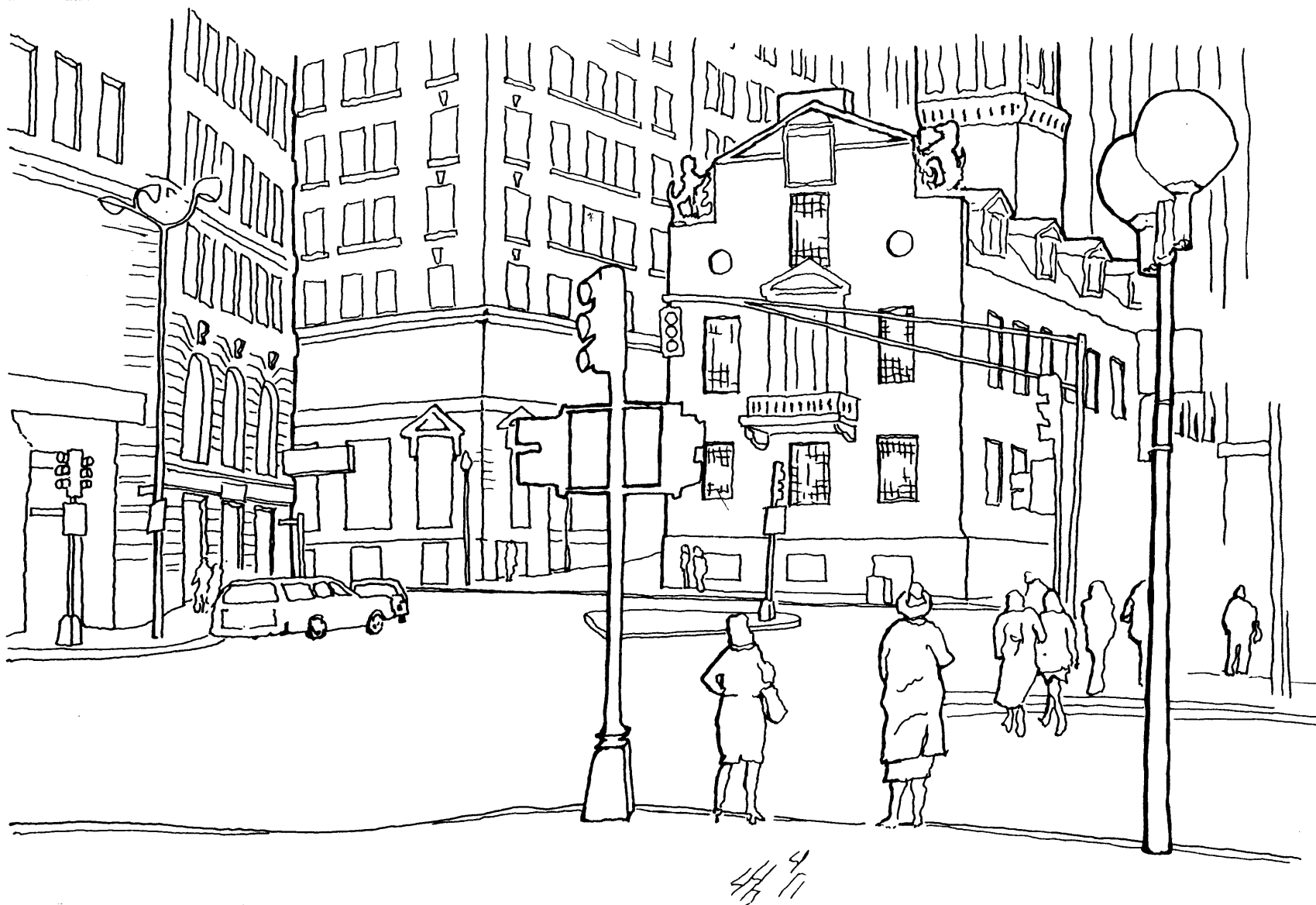


Unhappy Boston! see thy Sons deplore,
Thy hallow'd Walks becloud'd with guiltless Gore
While Faithfuls Frown and his savage Bands
With murderous Rancour stretch their bloody Hands
Like fierce Barbarians grinning o'er their Prey
Approve the Carnage and enjoy the Day.

If falling drops from Rage from Anguish Weep, but know Ears flamm'd to that awful Goal.
If speechless Sorrows lab'ring for a Tongue, where Justice strips the Murderer of his Soul.
Or if a weeping World can ought appease, Should venal C— to the scandal of the Land
The plaintive Ghosts of Victims such as these: Snatch the reluctant Willian from her Hand.
The Patriot's copious Ears for each are fired, Keen Execrations on this Plate inscrib'd.
A glorious Tribute which embalms the Dead, Shall reach a JUDGE who never can be brib'd.

The unhappy sufferers were Messrs SAM^l GRAY SAM^l MAVERICK, JAM^s CALDWELL, CRISPUS ATTUCKS & PAT^r CARE
Killed. Six wounded two of them (CHRIST^l MONK & JOHN CLARK). Mortally

180 Paul Revere's engraving of the 1770 Boston uprising in front of the Old State House.



181 The Old State House - existing.



182 Proposed improvements to enhance the Old State House as a nodal point.

DESIGN PROPOSAL 7

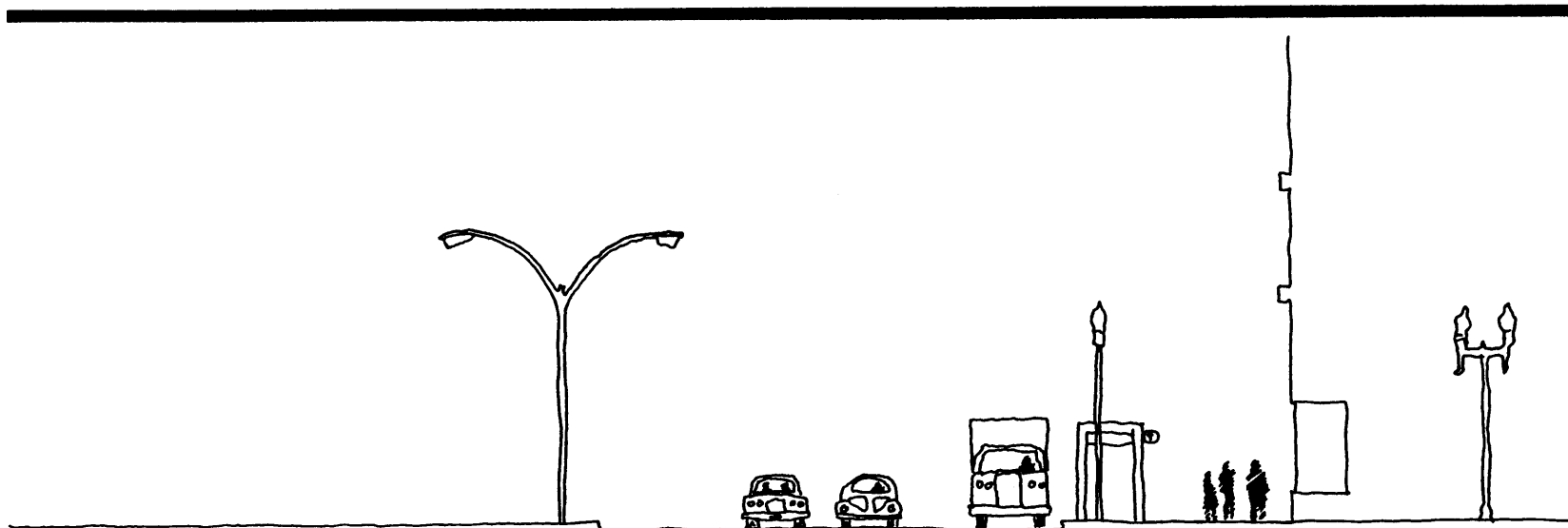
ENRICHING THE CHARACTER OF TREMONT STREET AND ITS ASSOCIATION WITH THE BOSTON COMMON

This proposal illustrates potential improvements in the visual and functional characteristics of Tremont Street, attempting to rebuild the strong character it once had. A highly public and pedestrian environment is proposed, with a strong park edge along the Common and a mixed-use building edge on the east side. Cafes, restaurants, galleries and specialty stores are examples of building uses which would reinforce and be most compatible with the public orientation of the street.

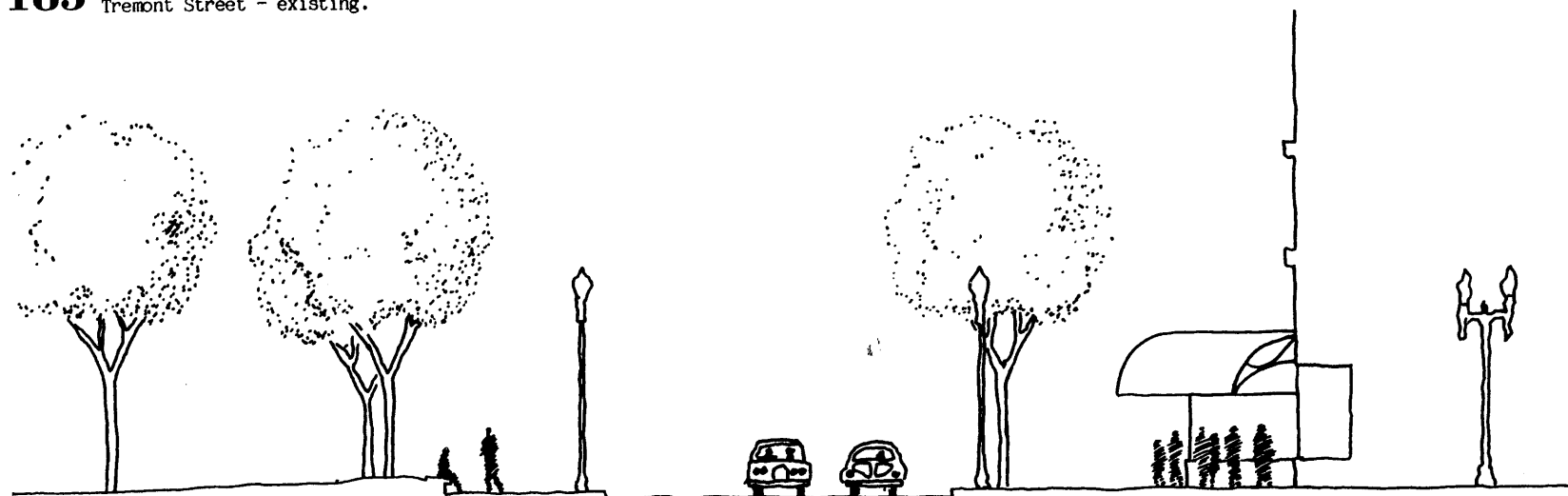
The design improvements are indicated in Figures 183 and 184. It is proposed that the existing parking lane on the east side of Tremont Street be replaced with a sidewalk extension, (with parking spaces for service and delivery vehicles), providing more pedestrian space and easier pedestrian street crossings. Red brick resurfacing of the sidewalks is proposed, for both sides of the street, to integrate with the brick surfaces of the Downtown Crossing

pedestrian district. Canopies are proposed along the building edge; additionally consideration should be given to small building extensions into the street to provide niches for outdoor cafes and other edge related public activity. The streetlights should be identical on both sides of the street, providing suitable lighting for both drivers and pedestrians. It is also important that the design characteristics of the streetlights be of human scale because of the pedestrian nature of the street.

The existing tree planters on the edge of the Common are proposed to be removed and a dense tree line, as indicated in Figure 184, established. As previously mentioned the promenade on this side would be resurfaced in brick identical to the east side of the street. Other street elements, for example kiosks, signage and subway accesses, should be architecturally integrated into the design of the street so that the street is perceived as a unified entity.



183 Tremont Street - existing.



184 Proposed improvements to Tremont Street - section.

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